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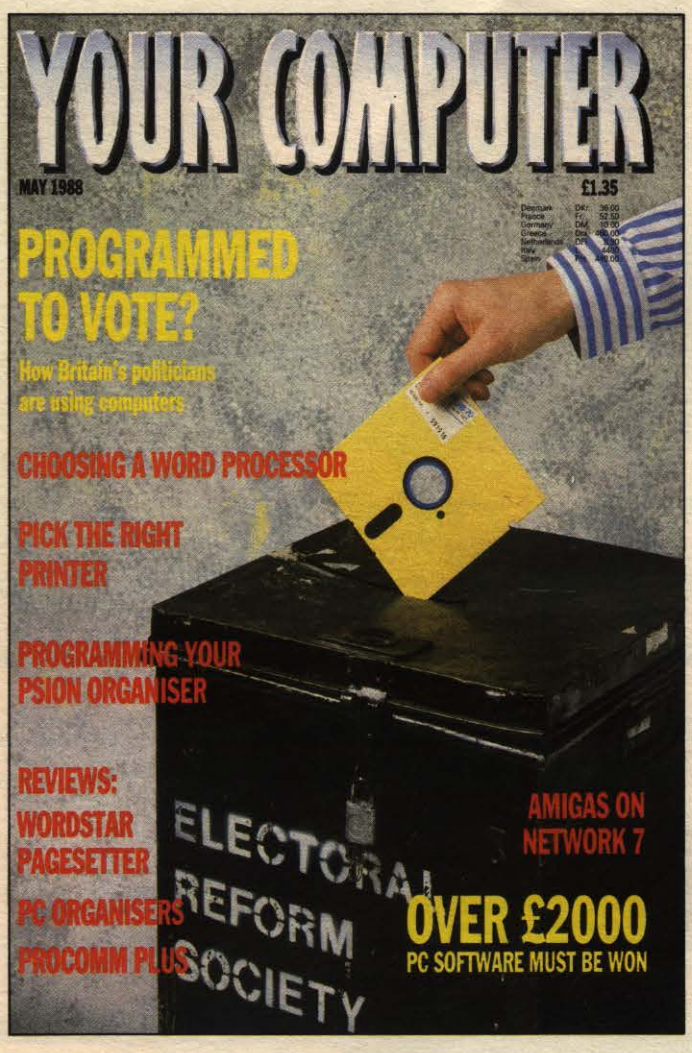
MAY 1988

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Back issues of the magazine from January 1986 onwards are available for £2.00 (U.K.), £2.75 (Overseas) from the Back Issues Department, Greencoat House, Francis Street, London SW1P 1DG.

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## NEXT MONTH

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# COMMENT

Our cover feature this month, examining the way political parties use computers, provides an interesting glimpse behind the scenes of organisations increasingly preoccupied with presenting a squeaky-clean, organised image to the hapless voter.

We hope politicians are able to avoid some of the notable errors that have emerged over recent years – such things as signed letters from Norman Tebbit to the likes of Arthur Scargill and Derek Hatton, appealing for funds.

A more worrying aspect is the availability of mailing lists for use by organisations. As such techniques grow in popularity, further controls on the sale of such lists will surely have to be introduced.


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# NEWS

## Amstrad and Atari give in on chip prices

British company Inmos regarded Dynamic RAM production so unprofitable that it has closed its factory. This year prices have gone through the roof, from around $1.50 for a 256K DRAM to anything up to $6.

The first companies with price rises were Atari and Amstrad. Huge sighs of relief were heard from the direction of Commodore when Atari put £100 on the 520 and 1040 STs and the Amstrad across-the-board – except for the entry-level machines – of £50 triggered the merry click of pricing machines in PC clone manufacturers throughout Britain.

With silicon prices in mind, the two miscreants should really have raised their prices by $30-60, depending on how firm their current silicon suppliers are, but they could be anticipating further rises.

Amstrad claims it is paying $3.50, still comparatively low, but the company cannot bear to be seen to be paying more than anybody else. The prices also adjust structures somewhat. The 1040 uses twice as many DRAMs as the 520, so becomes comparatively cheaper. It is also very convenient for Atari that it managed not to raise the 520 price to £399 before the Christmas rush. If Atari was intending to sell the 1040 as its entry-level machine for Christmas 1988, lessening the attractions of the 520 now might be even more convenient.

## Atari makes Unix debut

Atari showed its 68030 Unix workstation at Hanover Fair. Atari U.K. managing director Bob Gleadow, who seems to be making the running everywhere as far as the Atari move upmarket is concerned, says the Unix machine will sell alongside the Abaq, which will also be a Unix machine and will not be a big ST.

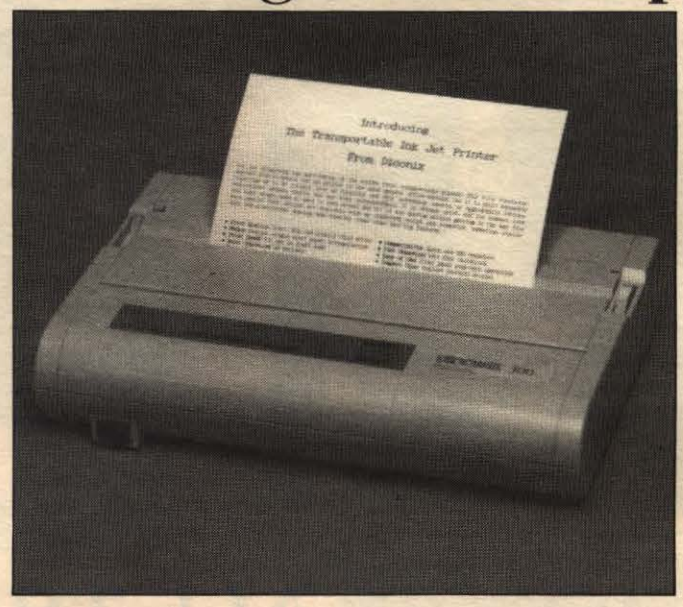
Contrary to rumours, by the way, the Abaq will not be an ST add-on. Development systems are using STs for I/O but the intention is again for it to be a machine in its own right.

## Activision/AT

Ed Esber, chief executive of Ashton-Tate and also runing the Ashton-Tate Mac division has taken a board seat at Games Software House Activision.

Activision claims that Esber's business experience will stand the company's business software range in good stead but there is another possibility. Activision has already done a good deal of work for the Apple Hypercard, the revolutionary icon-based programming/thinking/outlining tool, and Esber and Ashton-Tate are very interested in the Apple market at the moment.

## Diconix goes desk-top



● **Diconix 300W ink-jet printer.**

The most pleasant printer to appear in recent weeks has been the Diconix 300. Diconix is a subsidiary of Kodak and last year produced a lightweight portable ink-jet printer. The company had beaten the reliability and smudging problems of ink-jet but the portable, although a good printer, remained one of the better-kept secrets of the industry.

Now Diconix has gone for desk-tops with the 300 and 300W – for wide carriage – at £499 and £599 respectively. There are five print modes and two characters per inch – settings run from 40-310cps and are quiet, with first-class output.

## IBM aims for 80386-only PS/2

The most ominous news of the last few weeks was from Boca Raton, Florida where IBM briefed a group of U.S. analysts on its strategy for PS/2, the new generation of machines which one year into its life has yet to set the world on fire.

The IBM solution seems to be simple – throw away all your 8066 machines, do likewise with the 80286 and get everybody to use 80386 machines. That means using the top-of-the-range chip all through the IBM range. To be on the safe side, reduce your prices until the opposition screams for mercy.

IBM probably figures it can maintain expensive high machines at the same time as creaming the clone makers. Even if the market misinterprets its statements as meaning it is going bald-headed for low prices there is no way IBM will be able to stop it once is is rolling.

The bottom line of the Boca Rator meeting seems to be that IBM will have a 286-based PS/2 machine out soon at around £1,500 and sees itself as having the Model 50 and 60 – also 286 – at around £1,350 by the middle of next year. Again in the middle of next year 386 machines could be available at around £1,500, while by the end of the year IBM should be moving visibly to a 386-only policy for PS/2.

That is something of a compressed timescale, even for this industry, but if you interpret movement towards and not excluding a continuing presence for the 286, and if you bear in mind that 386 configurations could conceivably be of a lower specification than 286, it migh still fit.

# EA takes Trip towards the '90s

Californian 16-bit software giant Electronic Arts is aiming for a big stake in the interactive CD market, which it claims will explode in the next two to three years. That was the message from corporate chief Trip Hawkins when he visited the company U.K. headquarters at Langley, Berkshire. He was there partly to keep an eye on his U.K. operation but also to talk to journalists about where he sees his company's future.

It is more than a year since EA announced its move to the U.K. and in the last 12 months the company has enhanced the reputation it had established for high-quality 16-bit software. Products such as *Deluxe Paint* and Chuck Yeager's *Advanced Flight Simulator*, now available in a number of high street stores, have shown that the early EA lead in 16-bit is paying off.

The company recently obtained a foothold in the Far East and the Antipodes with the formation of Electronic Arts Japan and the acquisition of Entertainment and Computer Products, Australia's largest games distributor.

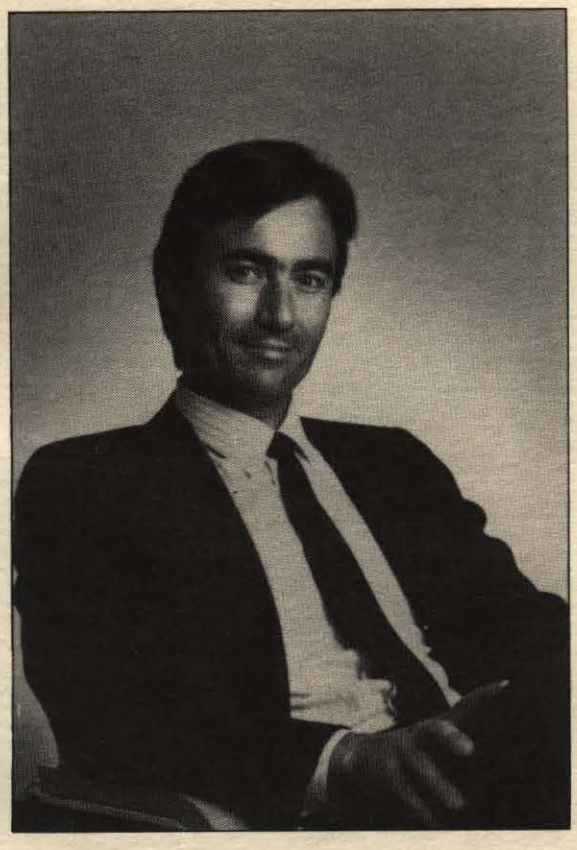
Hawkins talks of the way he thinks CD or optical disc technology will tie the entertainment software market together. The same technology will be able to serve the game console, coin-op and personal computer markets.

He predicts the early arrival of a CD Combi system, based on the Motorola 68000 processor, which would play video and audio compact discs and interactive CD software. It will have more than 500MB storage space and Hawkins reckons that hardware prototypes could be completed by the summer and ready for launch by CES next January.

If his timetable is accurate, first models should reach the market by the third quarter of next year and reach volume sales of more than 250,000 by 1991, with a possible price of less than $500 – about £273 at rates at time of writing.

In terms of other software publishing, it appears that the Langley headquarters is to be used to spearhead a huge expansion of EA operations throughout Europe. "There is no reason why the European market cannot be as big as that in north America," Hawkins says. Given the company's recent push into the Japanese arena, it is surprising that Hawkins still believes the European market to offer most potential for expansion, although he cites greater cultural compatibility in products for the European market as a major factor.

In the meantime, EA is expanding its desk-top video series with the release of Deluxe Paint II for IBM PC and compatibles. This version supports the whole range of MS-DOS graphics formats – VGA, MCGA, EGA, CGA, Hercules and Tandy. Also just on the market for the Amiga is *Deluxe Productions*, a package designed for professional video and business presentations which is fully-compatible with existing packages such as Deluxe Paint and Deluxe Video. Price is £149.



● **Hawkins: eyeing interactive CDmarket.**

# Commodore business bundle

Commodore, which says it will hold down its prices, has produced a bundle which makes the Amiga look as if it might possibly be £399, too. For £599 you get a printer, monitor, software and MS-DOS emulator. Some readers claim they are getting five percent of the price as their own whereas 10 percent is generally viewed as the kind of margin which could get a manufacturer's throat cut.

Prior to the Atari price rises the trade was viewing the bundle as an interim measure while Commodore U.K. tried to persuade German management to allow a full price reduction.

# Lap-top Mac leak

Apple accidentally leaked a 160-page document detailing the specification of the lap-top version of the Macintosh. Despite near panic over the imminent release of the machine, it seems the document was provisional, designed to be used by Apple to consult analysts and industry people.

Apple is now thought to be back at the drawing board, trying to get it smaller for the launch, which is still scheduled for the beginning of next year. The machine at the moment, incidentally, has an active matrix screen, which allows each pixel to be lit individually, twin floppies and scope for a 20MB hard disc and credit card RAM packs. The price of £6,000 is unlikely to be less.

# Samsung bargains

One of the most unpleasant things about the new generation of personal computers is the price of add-ons. Huge programs mean huge amounts of memory and superb graphics mean you have to pay plenty for monitors.

Korean company Samsung, however, is tackling the problem with an A4 monitor for less than £600 and a VGA – IBM graphics array model – for £399. Now all Samsung has to do is get the Korean silicon industry moving.

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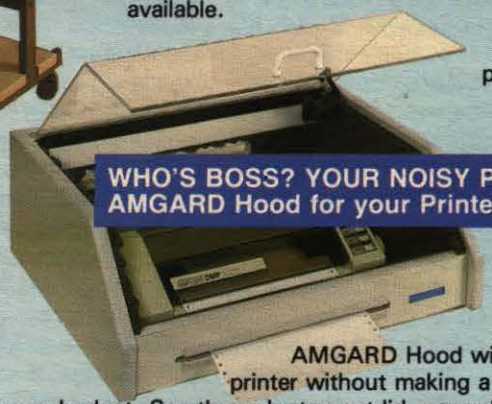

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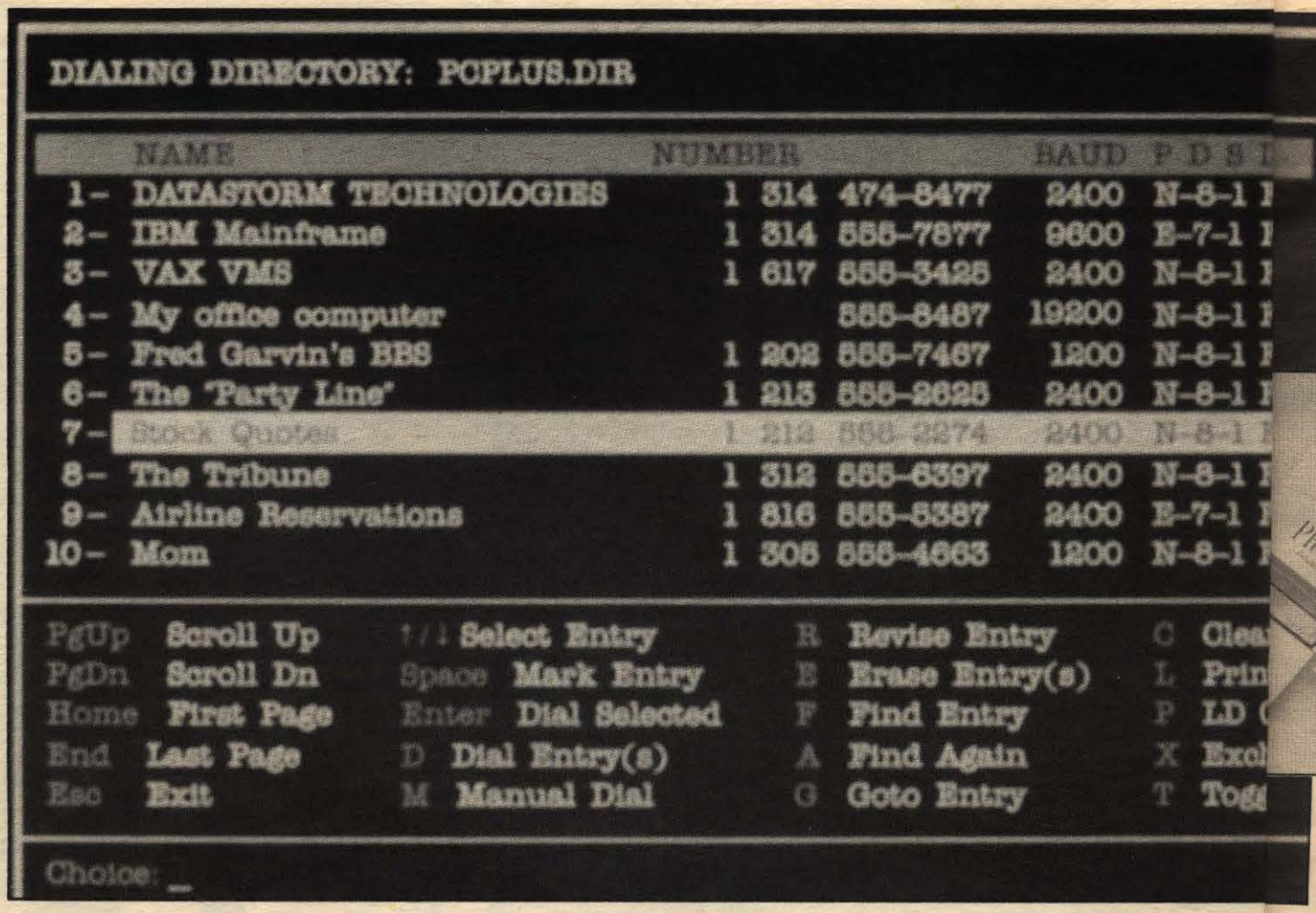



# Procomm comes of age

Procomm, the comms package, is one of the most prolific programs in the PC world. Scarcely any modem users have not heard of its legendary abilities. Most modem users will at some time have seen and/or used the package. Procomm, however, is a shareware package – meaning that if you like your copy you can register for updates – a bound manual and technical support from Datastorm Technologies, the software house behind the package.

Procomm has failed to make headway in the business software world, mostly due to the amateur status shareware packages incorrectly have attracted through the years. In answer to this and a number of other points, Datastorm has now updated Procomm dramatically and turned it into a commercial package. The result is *Procomm Plus*, released officially earlier this year at $75.

Procomm Plus is, as the packaging and disc-based documentation clearly note, not a shareware package, nor is it in the public domain. Copying the package, except for the purpose of creating security back-ups, is expressly forbidden. A slightly function-limited version of the package, called Procomm Plus Test Drive, is available for download on a growing number of bulletin boards and via the usual shareware outlets. The demonstration package does not incorporate a keyboard remapper – supplied as standard on Procomm Plus – nor are the disc-based documentation files anything other than very basic.

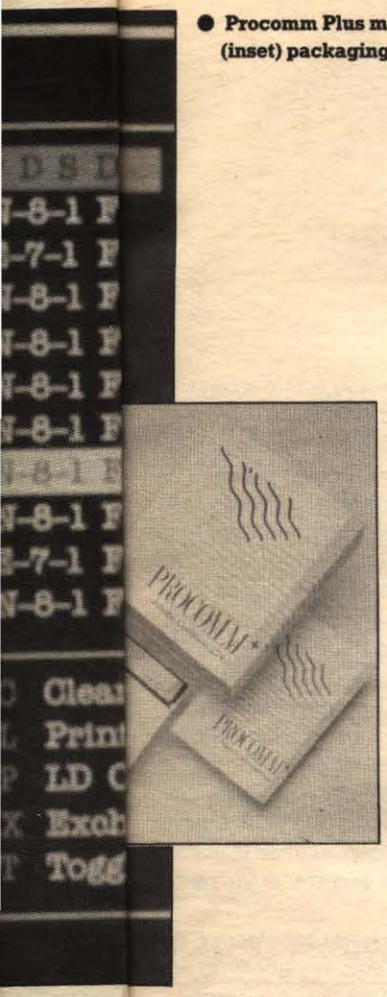
PC Plus Test Drive, as the demonstration package is called, is a very good indication of the facilities Procomm Plus offers. Prospective buyers of the commercial package would do well to obtain the demonstration version from their nearest shareware and public domain sources.

Like most U.S.-originated comms software, Procomm Plus does not support the ubiquitous 1,200/75 baud rate used by Prestel and several other European viewdata services. That means that if your modem is capable of supporting the baud rate it must be of the speed-buffered variety. PCs normally do not support split baud rates such as 1,200/75 baud, so any modem/PC interaction at such speeds must be performed within software.

## BULKY WHITE BOX

Procomm Plus, however, supports a wide range of baud rates, ranging from 300 through to an astonishing 115,200 baud. Such high speeds are used normally by direct point-to-point serial links, rather than modems.

As with Procomm, Procomm Plus offers a large number of file transfer protocols. Twelve protocols are supported internal to the package – X-Modem, X-Modem 1K, Windowed X-Modem, Y-Modem, Y-Modem G, I-Modem, Sealink and Kermit. ASCII file transfers are also supported as a matter of course. Future file transfer protocols are also supported by the inclusion of three external hot



● **Procomm Plus menu and (inset) packaging.**

# STEVE GOLD REPORTS ON THE LATEST INCARNATION OF PROCOMM, A PC SHAREWARE COMMS PACKAGE.

keys, which can be configured to page in an external protocol via the DOS gateway.

No fewer than 16 terminal emulations are available in the customising menus for Procomm Plus. They range from the simple glass teletype through to IBM and Lears-Siegler specifications.

Procomm Plus is supplied in a bulky white box which gives it a very professional appearance. Inside the box is an A5-sized paperback manual plus free Compuserve and Official Airline Guide starter kits, and the two program diskettes.

Although Procomm Plus is not copy-protected, the code of the package, along with one of the discs supplied, is numbered serially. This number is included on the program registration card, which must be posted to Datastorm Technologies before technical support can begin. Because of the proliferation of PC hard discs during the last few years, Procomm Plus has a special hard disc installation routine. The complete package can be squeezed on to a single floppy but the utility programs make for frequent disc swapping. Practically speaking, a twin floppy PC with at least 192K of available RAM is the minimum system configuration with which Procomm Plus will work.

Once installed and run for the first time, the package begins to create various system files, in which dialling directories, program and modem configuration details are stored. Before allowing the user to get at its myriad functions, Procomm Plus checks and initialises the modem, going through a number of logical diagnostic procedures if the modem fails to respond initially.

Reflecting its origins, the Procomm Plus command structure is broadly similar to that of Procomm. Most commands are one key mnemonic – memory-aiding – ALT-D pages in a dialling directory, ALT-S pages in the set-up and configuration page, and so on.

It is only when you explore the many features of Procomm Plus that you begin to realise that the package is several stages on from the original ideas and concepts behind the original shareware Procomm. The dialling directory merits a chapter to itself and offers facilities such as call logging and itneractive displays of call information. When a particular service is selected from the on-screen dialling directory, details of the service, along with date last called and default protocols for file transfers, are all displayed on-screen. That makes for plenty to read while the modem is dialling the service in question.

Hayes-compatibility is assumed as the default command system for Procomm Plus to employ when talking to the modem. Other esoteric modem command protocols are supported by the package and can be installed from the installation module supplied with Procomm Plus.

I tested Procomm Plus with a range of modems, ranging from a 300/300 baud acoustic unit through to a U.S. Robotics Courier HST, which is capable of NMP level 5 error-correction and 9,600bps operation. No problems were encountered.

I also checked each individual file transfer protocol and even installed external file transfer protocols such as Megalink, Z-Modem and a number of others. There were no problems, other than short delays while the DOS gateway was opened for external protocols.

After installing the package on my 8086-based PC at home, I tested Procomm Plus on a Tandon 286 PC and a Zenith 386-based PC at my office. The program execution speed was very fast. Saving to disc was almost instantaneous and, because of the extensive RAM-buffering, no flow control on the part of the modem was required, even at speeds as high as 17,200bps using the Courier HST modem with the MNP level 5 data compression option.

I experienced a disconcerting screen jitter when using the package with an automatic EGA card.

The HEGA 80 card which was fitted my PC seems to flicker between operating in the CGA and EGA mode when the screen content changed dramatically – e.g., such as when colour ANSI graphics were displayed.

## MOST EMPHATIC YES

This problem was resolved by changing the dipswitch positions on my EGA card and is one that is encountered on colourful packages like Procomm Plus.

I could have chosen to run Procomm Plus in monochrome by keying-in PCPLUS/B from DOS. Other software switches for running the package directly from DOS include the PCPLUS/Q switch for muting all the sound effects and alarms.

After several weeks' use of the package and weaning myself slowly from the original Procomm, I can report that version 1.0 of Procomm Plus is a great improvement over the original shareware package. Is the package worth $75 – about £45 at current exchange rates? The answer is a most emphatic yes.

Because many people are using the original Procomm without having registered with Datastorm as a shareware user, it is likely that they will not buy the package. Registered shareware users of Procomm have a short time in which they can buy a copy of Procomm Plus for $25.

Most users will, I suspect, take the option; the manual alone is worth most of this cost.

Datastorm has probably dug its own grave in continuing to market and support the shareware version of Procomm. That is good for the end-user, since it allows an option to use the package free if the legal and moral implications of such actions are overlooked.

The issue of Procomm Plus Test Drive into the public domain will also cause problems for the company.

I suspect that some users of Procomm will upgrade to test drive version of Procomm Plus and not pay for the full-blown package. Disregarding the politics of the original Procom, Procomm Plus is an excellent package and well worth its price.

Several U.K. dealers are about to start importing the package for sale around the £50 mark. Whether you buy the package locally in the U.K. or by mail order from the U.S. – all major credit cards accepted, says Datastorm – you will not be unhappy with Procomm Plus.

Contact: Datastorm Technologies Inc., Suite G, 1621 Town Drive, Columbia MO 65202, U.S. Tel: 0101 314 474 8461.

# letters

## Which Pussy?

I do not know if you or any of your readers have a word processing household pet but our cat, Boston, a large black tom, has a habit of using they keyboard of my CPC6128 as a stepping-stone to the view of the window. When I left the computer I discovered that he had added his own pussy clause to some text on which I was working, like this: LKKKKKK...*BBBBB&&&&BB BBTERTWWWWWWQQQQ QQ12XDDDDFVXR33#%%!! 333.

From the closeness of the letters it seems that he does not pause to think and he is definitely not a TABby cat. I cannot imagine what might happen if I had a mouse of WIMPS.

He just sat and looked at me with an expression of amused satisfaction as if to say "That makes just as much sense as anything you can write". I had to CAT the disc to fond the original and start again.

**J Grey, Eastbourne.**

*Editor's reply:*

*I think this tail may be just a whisker from the truth but for once I think I will let my cat insert the last claws ][weehui2qq651./;dwgy32.*

## Educating Archie

Thank you for your review of our product Artisan for the Archimedes computer, page 28 in the February edition. While I am happy to see a magazine doing an in-depth review, a rarity these days, I am a little concerned at some of the errors.

First, the price is £39.95 and not £49.95 as stated. We have not provided programs for the Welcome disc but we worked on several projects for Acorn, none of which ended as products supplied by Acorn. One such produce has now seen the light of day as *Graphic Writer* from us.

You also attribute a program called Archive to us, stating that it is a word processor. We do not have a product called Archive but we have a word processor called Graphic Writer which fits the description given.

You also criticise the use of mode 12 with 16 colours for Artisan but I do not think the basic problem has been understood by your reviewer. Point one is that Acorn informed us initially that the window manager would operate only in mode 12 and it makes sense to use the standard window manager rather than define our own non-compatible system. The WIMP facilities in Artisan are the same as any other program which uses the window manager and thus provide the user with a consistent interface.

Point two relates to the extra memory required for mode 15 but it would not have been too much of a problem to have a version taking this into account. Acorn obviously believed that the window manager would not work in mode 15 as it allowed only four bits to be used for defining colours in the window manager. That restricts the choice to the first 16 colours and they are not very presentable in the standard palette. You can alter the colours but because of the method employed by Acorn the action of changing one colour has unpredictable results on other colours in the current selection of 256. The problem, therefore, is much more complicated than just going into mode 15. Having said that, we are working on a program to be called Artisan Professional. It will have many additional features and will operate in mode 15.

While Artisan will boot up under Arthur 0.2 and 0.3 it is likely to crash unless the manual is followed concerning the required configurations. The problem arises whenever the beep is required, since the machine will hang completely. That is caused by a bug in the RMTIDY of Arthur 0.2 and 0.2 which mixes pointers and cannot perform a beep. The beeps happen if the printer is off-line and is needed or if the fill cannot complete a pattern fill because the pattern contains too much of the background colour. That is a known feature of the Master series as well as the Archimedes.

Circle sizes and rotation angles are not adjusted using the right mouse button. You plot a point with Select and then move the mouse until the required size is achieved. You then press Select again to fix it. If you used the right-hand button, known as Adjust, the current graphic is deleted.

The Magic Brush has an additional feature which lets you change any colour to a combination of any other two colours using pixel dithering. You access the option from within Magic Brush by clicking on the rainbow icon at the top right-hand corner of the Magic Brush window. If you do not read the manual thoroughly you would not know it was there.

The toolkit menu does not access the Integrex dump. That is supplied as a stand-alone program on disc. The fonts cannot be user-defined as you state but we have additional fonts available and some of them will be included on the Artisan Support disc due out by the time readers see this.

Your subjective assessment that Artisan is not up to the standard of programs on the Atari and Amiga should perhaps be qualified by the fact that the Archimedes was released in September, 1987, as was Artisan. I agree that better packages will appear and we think that Artisan Professional will be best of all. Should we have left users without an art package while we worked on a super-duper art program? The response from users suggests that we have been justified in releasing Artisan and at £39.95 it is good value.

This letter will clear up some of the inconsistancies in what was a very good in-depth review. It is pleasant to see a magazine reviewing products properly and giving readers an unbiased opinion.

As reviewers, you have the right to your opinion, even if you do not like the product. It annoys me to see reviews, good or bad, in other magazines where it is obvious that the reviewer has obtained his information from advertisements, the manual, and about five minutes with the package. So long as you continue to provide reviews of this calibre with a right to reply where errors have occurred I will be happy to continue to send review copies of our software.

**David Clare**
**Clares Micro Supplies**
**98 Middlewich Road**
**Rudheath, Northwich**
**Cheshire**

## Amiga full

I have had my Amiga 500 for two weeks now and am very pleased with its performance but there are two questions I would like to ask concerning the operation of the machine. When using the RAM disc I noticed that the INFO

***Something to say about personal computing? Why not share it with other readers? Write to Readers' Letters, Your Computer, Greencoat House, Francis Street, London SW1P 1DG. Letters may be edited for length. Don't forget to include your name and full address.***

command tells me that it is 100 percent full with only 1K used. Putting more files on it increases the size but it still remains 100 percent full. Is my system working correctly as the ordinary discs do not operate in this way?

I have upgraded from a Commodore 64 to the Amiga and so have plenty of old 64 software on disc. It is possible to use the C64 software with the Amiga and, if so, why?

**J Lawrence, Wirral, Chesshire.**

*Editor's reply:*

*The RAM disc is operating correctly and is always full. The reason that the RAM disc takes away memory from the main system to store files. The Amiga, being the flexible machine it is, sets aside only sufficient memory for RAM disc needs and no more, unlike other systems where the RAM disc is initialised to be a set size.*

*There is a Commodore 64 emulator available for the Amiga but, so far as I know, only in the U.S. For more information, contact Readysoft, PO, Box 1222, Lewisham, N.Y. 14092. The price is around £50 and it consists of an interface cable for the 1541 to connect it to the Amiga.*

## Deterrent

I am considering buying an Atari ST but after looking through a few magazines I have been deterred by a number of letters with people's problems. There seem to be many things about the ST which are either unknown or cause trouble. Is the ST a good buy and are there as many problems with it as there appear to be?

**A Stewart, Hull, North Humberside.**

*Editor's reply:*

*I think the reason so many people write asking questions about the ST is not because there are problems with it but because it is still a relatively new machine. Looking over back issues of magazines, all computers seem to go through a stage where people want to know more about them. The ST is a sophisticated system and is capable of doing much more than the present software base reveals. Some of the programming ideas and concepts are new to what was previously an exclusively 8-bit market and thus need more explanation.*

*Problems with interfacing the ST to monitors and disc drives is just another symptom of its newness; everyone who wants to know is able to do such things to a Spectrum or C64 with no difficulty. In the near future I expect we will see the same thing happening to the Amiga and the Archimedes. So, on the whole, the ST is a good buy and there is certainly nothing drasticaly wrong with it.*

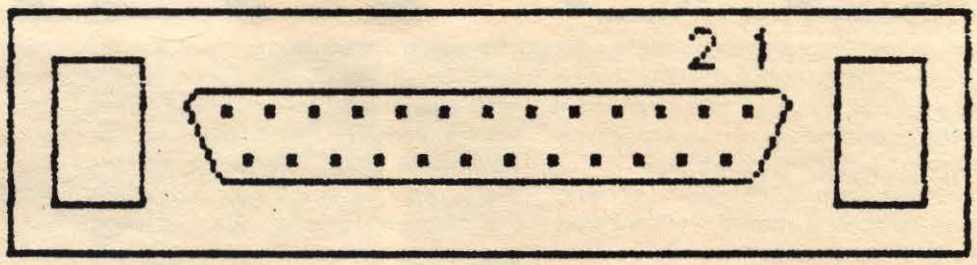
## Hello Tosh

I have had an Apple Macintosh and imagewriter for some time and have just acquired an Amiga 500. I would like to be able to connect the Imagewriter to the Amiga but, since the Apple equipment was second-hand, I do not know the connections for the printer. Could you tell me which pins go where so that I can make a cable? Setting-up the printer should be easy, since there is an Imagewriter option of the preferences printer set-up.

**Adrian Smith, Islington, London,**

*Editor's reply:*

*The Imagewriter uses a serial interface – RS232 – and can operate at 300/1,200/2,400/9,600 baud rates. The plug you will need for the printer is a 25-way male RS232 connector. The pin assignments are shown below and you should connect the signal grounds – SD goes to RXD on the Amiga, RD goes to TXD, and DTR goes to CTS. The mode of operation is that DTR is used to tell the computer the printer is busy. The DIP switches may need to be changed; Switch 1-5 open selects 8-bit transfer, 2-3 open selects DTR protocol; switcehs 2-1 and 2-2 control the speed Open. Open is 300 baud, CO=1,200, OC=2,400, and CC is 9,600. The pin-outs are shown below.*




Looking into printer socket.

1 Frame ground
2 SD
3 RD
4 RTS
7 SG
14 Fault
20 DTR

# PROGRAMMING THE GOVERNM

## High-tech Tories

Political activity has taken a high-tech flavour. Campaign workers marched into the last General Election armed with an aersenal of computer weaponry aimed at providing the edge on polling day. Two factors made it possible. First, the 1986 decision by local authorities to allow the electoral register to be sold to political parties on magnetic computer tape rather than hard copy. That eliminated the daunting task of keying-in tens of thousands of names and addresses into a constituency database.

Second, the plummeting cost of equipment, notably PC clones like the Amstrad, meant that micro-based systems powerful enough for political computing, became affordable.

The Conservatives were the only computerised party in 1983 but it had not centred its computer activities on the micro. The heart of its computer campaigning is the powerful ICL ME29 mainframe at Central Office. "Nationally, computers are used at two levels – administration and methods of communication. That is new technology to attract new people," said a Central Office spokesman. Translated, that means new technology for more money. Conservatives, sending to as many as one million people a month, are recognised by their political rivals as experts in computerised fund-raising.

In the first blitz since last June, the party raised £100,000; even though it lost money on a mailout to BP shareholders junked because of the crash, it is still on target to raise £400,000 to equip a flying squad of computer experts to take the Tory message to the Labour heartlands. The party nationally is looking to secure £1 million to assist local computerisation.

A disadvantage of the centralised computer philosophy is that the mainframe cannot give the consitituency parties much support on the day of a General Election. Election law precludes national mailing during a campaign because any exercise involving singling out voters must be declared on the expense returns of individual candidates in the constituencies concerned – a costly bureaucratic nightmare in such a massive operation.

Computerisation of the local campaigning effort was marred by the experience of a system manufacturer which went bankrupt. In 1983, the party eagerly invested in the doomed microcomputers from a fledgling British manufacturer, Tycom. The Tycom Microframe won the Rita Newcomer of the Year Award and the managing director, Alan Timpany, was able to convince the party to place a £1 million contract to supply 200 Microframes for local constituencies.

The entire project was ill-conceived. Claims that the system was 'future proof' with an internal architecture which could be upgraded regularly were unproven. The new company was chosen ahead of the established hardware and the party paid the price. Ironically, as Tycom was sinking it made a last-ditch bid to sell the product to the Soviet Union. Tory sources admit to have been "badly burnt by the experience".

Nick Twilley of the Conservative Computer Forum says "the affair still hovers in the background and because of it the party is very secretive about what it is doing with computers. It does not want another Tycom."

Twilley is also the editor of the *Conservative Micro News*, which promotes the use of technology among Conservativ activists. He is concerned that the Torie are slipping behind at local campaignin level. "The Conservative Party remain streets ahead in fund-raising but I hav grave doubts that the party is offering computerised electoral register packag which is up with the competition," h continues, referring to the *Consort Regis ter* produced by the Croydon-based Si verjay company, "but there are activist who undoubtedly have the winning sof ware."

The Consort Register, though n recommended by Central Office, a polic described as "scandalous" by one acti ist, is now used by 50 constituencies. was blooded in the General Election some close-fought confrontation including the battle of Richmond. It cha lenged the Alliance software, until the considered superior, and on the da turned a hairsbreadth majority of 74 into comfortable 1,500.

Silverjay managing director Len Harri once described as "the U.K. doyen of fir electoral roll analysis" and a life-long To activist, prefers to talk about the potent of his product rather than the myopia party mandarins. "It is software design to work with Conservative Party volu teers and can be used with minimum t tion. Ease of use and the large number powerful facilities to select and targe wide variety of groups of voters has be a vital ingredient of our success," says.

The ideal hardware for the system is IBM AT-compatible computer – 20MB least – working with a fast dot matrix a laser printer. The software can conv any computer-based electoral regis regardless of whether the data is ASCI EBCDIC. A vital feature is the simplicity entering survey, canvass and voting da A module displays on the screen image identical to the canvass cards. T

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# MENT

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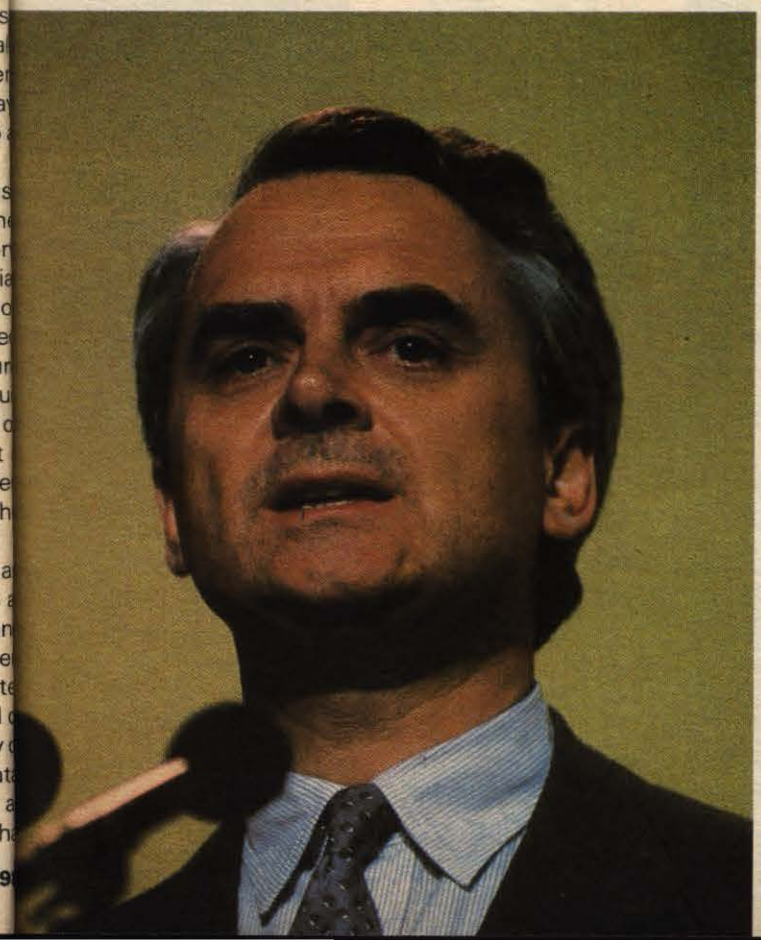

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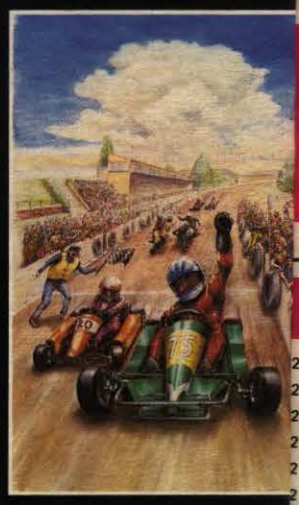

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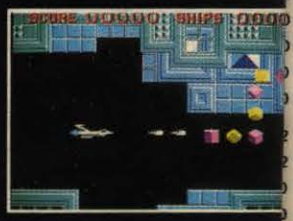

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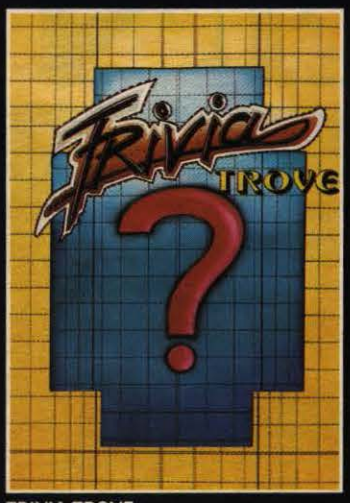


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216/72cps 80col S
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0 V21/23 (LED's)
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| 0 V21/23 PCW | £147 |
| 2 Professional (V22) | £317 |
| 1 Professional (V22 bis) | £491 |
| 0 V21/23 Professional | £236 |
| 0 V22 Professional | £397 |
| 0 V22 bis Professional | £523 |
| 3000 V21/23 | £236 |
| 3000 V22 | £250 |
| 3000 V22 bis | £469 |

## Epson

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| LX 800 | Popular low cost model 150 c.p.s. draft 25 c.p.s. N.L.Q. parallel interface, friction and tractor | £208 |
| FX 800 | Mid price printer 200 c.p.s. draft 40 c.p.s. NLQ parallel interface, friction and tractor | £316 |
| FX 800 | Sheet feed | £140 |
| FX 1000 | Wide carriage version of FX 800 | £415 |
| FX 1000 | Sheet feed | £160 |
| EX 800 | Heavy duty model 300 c.p.s. draft 50 c.p.s. N.L.Q. parallel and serial interfaces, friction and tractor feed | £418 |
| EX 800 | Sheet Feed | £145 |
| EX 1000 | Wide carriage version of EX 800 | £554 |
| EX 1000 | Sheet feed single hopper | £195 |
| EX 1000 | Sheet feed double hopper | £320 |
| EX 1000 | Colour unit | £60 |
| LQ 850 | Letter quality. 24 pinhead. 180 c.p.s. draft 60 c.p.s. letter quality, parallel and serial interfaces, friction feed | £486 |
| LQ 850 | Tractor feed | £44 |
| LQ 850 | Sheet feed | £140 |
| LQ 1050 | Wide carraige version of LQ 800 | £593 |
| LQ 1050 | Tractor feed | £55 |
| LQ 1050 | Sheet feed | £163 |
| LQ 2500 | Heavy duty letter quality, 24 pinhead, 270 c.p.s. draft 90 c.p.s. letter quality, parallel and serial interfaces, friction and tractor feeds | £831 |
| LQ 2500 | Sheet feed single hopper | £190 |
| LQ 2500 | Sheet feed double hopper | £300 |
| LQ 2500 | Colour unit | £65 |
| SQ 2500 | Silent ink jet printer, 540 c.p.s. draft 130 c.p.s. letter quality, parallel and serial interfaces, friction feed | £995 |
| SQ 2500 | Tractor feed | £65 |
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| EGW01 Enhanced EGA Wondercard any monitor/software | £212 |

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| LC10 | 120/36cps 4k Buffer paper parking, tractor, six fonts parallel | £178 |
| NX 15 | Wide carriage version of NL 10 parallel interface | £299 |
| NX 15 | Extra for RS 232 serial interface | £80 |
| NX 15 | Sheet feed | £121 |
| ND 15 | Mid price wide carriage, 180 c.p.s. draft 45 c.p.s. N.L.Q. friction and tractor feed. parallel interface | £380 |
| ND 15 | Extra for RS 232 serial interface | £75 |
| ND 15 | Sheet feed | £119 |
| NR 15 | Faster version of ND 15 240 c.p.s. draft 60 c.p.s. N.L.Q. | £456 |
| NB 24-10 | Letter quality. 24 pin head 216 c.p.s. draft 72 c.p.s. letter quality, parallel interface, friction and tractor feed | £463 |
| NB 24-10 | Extra for RS 232 serial interface | £75 |
| NB 24-15 | Wide carriage version of 24-10 | £584 |
| NB 24-15 | Sheet feed | £169 |
| NB 24-15 | Second bin for sheet feed | £109 |
| NB 15 | Heavy duty letter quality, 24 pin head, 300 c.p.s. draft 100 c.p.s. letter quality, parallel interface, friction and tractor feeds | £652 |
| NB 15 | Extra for RS 232 serial interface | £75 |
| NB 15 | Sheet feed | £169 |
| NB 15 | Second bin for sheet feed | £109 |
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| LSP100 175/30cps-s | £218 |
| MSP10E 160/40cps-p | £244 |
| MSP10E 160/40cps-s | £237 |
| 120D SSF | £72 |
| LSP100 SSF | £72 |
| MSP10E SSF | £108 |

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| P1082 80col 160/32cps | £198 |
| P1083 80col 240/48cps | £285 |
| P1540 136col 24pin | £480 |
| P1592 136col 180/38cps | £356 |
| P1595 136col 240/51cps | £425 |
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| Abbot DSDD Disks (10) | £6 |
| Abbot DSQD Disks (10) | £12 |

## Roland

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| 885 - A3 Flat Bed Plotter | £789 |
| DPX2000* - A2 Flat Bed Plotter | £2899 |
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is important, since the canvass card is the lynchpin of any electoral contest, providing all the reactions from the doorstep. The software is designed to keep the keystrokes to a minimum, reducing the number of potential bugs and making for swift operation.

The Consort Register can carry forward canvass information from one election to the next, producing a five-year profile of individual voters. In the heat of an election that information can ensure that time and energy is not wasted on pointless canvass calls. It also shows the most dedicated voters who can become targets for fund-raising or membership drives. The system costs £6,000 a year with an additional £1,000 for service, though with the computer-aided fundraising it should be possible to raise £12,000 a year.

## Labour loads up

Until 1984 the Labour Party was moving towards new technology at an almost glacial speed. Since then the party has been filled with a new urgency and now enjoys the use of an albeit a less powerful Hewlett-Packard 3000/42 mainframe. It is used for office finances, membership records and fund-raising drives. That, plus some statistical number-crunching, is about the maximum to which the machine can be stretched.

The regional offices use Apricot PCs standardised using *WordStar* processing and *dBase III* to produce detailed press briefs and statistics on a variety of issues. Almost all are hooked to Telecom Gold. "During the election, we sent three computer mailings a day to keep the constituencies informed of the previous night's events. They also communicated with us to ask for information or sent us the reaction to issues," explains John Mends, former information manager at Walworth Road. "We could gauge the reaction to our manifesto launch soon after the event through information sent via Telecom links."

For the Labour Party the first intensive use of information technology in elections was the Fulham and West Derbyshire by-elections in 1986. To stimulate such activities a computer advisory group was formed. Software is now being developed for the Amstrad PCW8256 in two application areas – *Elpack* for use in elections which handle 10,000 electors in a 100K floppy disc; and *Memlist* for constituency and branch membership records.

Both packages have been redeveloped in a new programming language known as Modula 2, an enhancement of Pascal. It was selected because the group wanted a language capable of supporting libraries of sub-routines and one which would make software as portable as possible. Modula 2 was considered the best language to protect the group investment through several generations of new machines. The party nationally has agreed to underwrite the cost of software distribution, so that the packages are available for £5.

Andrew Hudson, a systems analyst who is secretary of the group, says that at the moment the group is "only scratching the surface." He sees the advent of the Amstrad PCW8256 as a breakthrough, since its cost is in line with other consumer durables. "In contrast to the Tories, our biggest asset is people, their skills and talents. Our task is to co-ordinate them," he says.

The ability of the Labour Party to target voters personally has paid dividends. One London activist, reporting on the last local elections said: "The letters obtained good results. Canvassers were being told on the doorstep, 'I have a letter from Neil Kinnock.' In a ward with four polling districts, the one district in which the letter was distributed achieved a 61 percent turnout of Labour promises, against an average turnout of 39 percent in the other three districts."

The Labour Party believes that the U.K. IT industry is in a state of crisis. In a consultative document suggesting IT strategies which should be followed by a future Labour government the party trade and industry spokesman, John Smith, argues that the country is losing control of large areas of technology under the Conservatives.

To support his case Smith underlines a dramatic decline in the ICL share of the U.K. mainframe market under Tory rule and points to the way small but important companies in areas like software and computer-aided design have passed from U.K. control. In line with Labour's strongly interventionist philosophy, Smith calls for a stronger and better co-ordinated policy for the industry. He says Labour should build a strong national industry round a core of U.K.-controlled companies.

*"Canvassers were being told on the doorstep 'I have a letter from Neil Kinnock.' In a ward with four polling districts, the one district in which the letter was distributed achieved a 61 percent turnout of Labour promises, against an average turnout of 39 percent in other districts."*

## Democrats on disc

From all observations the Alliance, re-created as the Social and Liberal Democrats, made the most creative use of high technology in the 1987 campaign. It had a number of advantages politically and technically. The relatively small number of Liberal/SDP members meant that it could use its equipment for compaigning rather than the memberships files and fund-raising drives which the other parties need mainframes to handle.

Its biggest technical asset is a tried and tested program which has had time in use to get rid of the bugs. In early years many derided the amateurism of the Alliance computer effort but no more. Its professionalism is centred on Election Technology Ltd, a private company set up by Parry Mitchell and Paddy Ashdown, Liberal MP for Yeovil, and described by the final part of this technological triumirate, Gillian Gunner, as "a computer nut."

Gunner, a professional programmer, has developed the extremely successful *Polly* software package, designed to process the electoral register, used by more than 150 constituencies. Immensely successful, it is even rumoured that the Tories have tried to pirate the technology.

Election Technology offers a specialist service to transcribe electoral registers from magnetic tapes, as produced by the local authorities, to floppy disc, in a format readable by Polly. ET can handle almost all the code conversions of the 150 formats produced by local authorities. Tapes can be transcribed directly to IBM, Sirius, Apricot or Compaq floppy discs. The cost is £500.

"Many people who program computers for elections take an existing database and modify it to suit their needs," Gunner says. "With Polly, I decided to start from scratch and approach the problem as both a programmer and a politician. You want to do the basic paperwork – address lists.

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envelopes, print canvass cards, sequence the voter street by street." Polly does all that and more. The package of programs also instructs the computer to file and store data gathered on the personal circumstances of tens of thousands of people who make up the typical electorate. Age, sex, occupation and social class can also be stored.

For Bill McCormick, the Liberal computer consultant, "computers are extremely effective on the marginals. The key is the ability to analyse figures coming off the street referring to peoples' voting intentions. We want to target the people to put out the tactical squeeze." Targeting is believed to be one of the most important political developments of the last few years.

The theory is that as old class divisions break down and party loyalties are eroded, winning power is increasingly a matter of tailoring a political appeal to the personal backgrounds of individual voters. Pinpointing individual voter intentions depends on processing a large amount of statistical data quickly. Enter Polly, which for £3,000 including hardware, can identify every male NHS employee under 30 years of age in the area and generate a mailshot tailored to their prejudices and ambitions.

As expected from a party conceived in the computer age, the SDP grasped the technology with particular relish. David Owen is keen advocate of computerisation. He runs a fully-automated office at Westminster, using Rank Xerox 823 computers and 640 word processors. His political ally, Rosie Barnes, has made sure all her staff have an Opus PC. That is the epilogue to the computer *coup de grace* of her Greenwich by-election victory. "We brought in our top computer team. We processed information which such precision that we were reaching potential voters until 8pm on polling night," she says.

Like the Liberals, she believes that computers in marginal seats are vital. "Computers can deliver 10 to 15 percent of the vote. This explained the local disparities in 1987. In places like Bath and computers and their vote went up six percent, though the national poll was down three percent."

The merger controversy has led to bitter wranglings about the use of confidential data. The SDP was investigated last year over the 'liberal' use of its computerised membership list.

The Data Protection Registrar looked into allegations that the party's pro-merger group, Yes to Unity, made improper use of the SDP membership lists.

## Green technology

The mini-political parties – SNP, Plaid Cymru – are hamstrung by a lack of money and expertise in all but the most elementary computerisation. The SNP and Plaid Cymru HQ use Act Sirus and MS-DOS systems respectively for general office and administrative functions. Both would like to install laser printers but "just paying for all the postage it would create makes the costs prohibitive," says Alistair Morgan of the SNP. Times are hard

Expertise is also a problem. "We are looking to employ someone to advise on software, merge polling data, to get records on disc and provide training. The problem with such a small organisation is that we have to rely on volunteers but we hope this will stop everyone going off in different directions," Morgan says.

The Green Party, contrary to popular opinion, is not opposed to computer technology and is happy to use a BBC B micro at its HQ. Jonathon Porritt, a leading figure in the Green Movement, says: "I definitely do not belong to, or have any sympathy with that school of Green thinking which finds all technology abhorrent and which is of the opinion that it should be beaten up in Luddite style. I find that a ludicrous position to take these days, especially in an organisation which really does need to find a more professional way of doing much of the work it does."

At present, the party is considering seriously the potential of networking on both functional and ideological grounds. Alan Francis, the party IT spokesman, says: "We never apply the 'means to end' criteria in anything we do but with electronic mailing there is no contradiction. It can save a good deal of business travel and thus energy and time. It also saves paper and spreads information in a non-hierarchical way."

***"I do not belong to that school of Green thinking which finds all technology abhorrent and is of the opinion that it should be beaten up Luddite style. I find that a ludicrous position to take these days."***

Computer companies have remained business-like in their approach to political organisations. Both Tory party and Green organisations received special help from ICL. "Voluntary groups like ours have been getting assistance from companies like IBM and ICL. Not necessarily in terms of cash but in terms of advice and in software especially. If one was a cynic, one could say it is no skin off their back – it is part of the public image they need to project these days. On the other hand many people in the computing industry are aware of their responsibilities," Porritt says.

Some might assume that the Tories are the natural ally of the computer industry. Yet there is no evidence of cash donations to justify that. Plessey donated £27,500 to the party but it is a huge electronics comglomerate of which computers is only a part. Of more interest is the £20,000 gift of equipment from Rank Xerox to the three parties before the last election. A Rank Xerox spokesman said: "It was part of an image promotion of our office equipment. We wanted to prove our office equipment to a wider audience and influence public awareness."

Tomorrow's political stuggles will only extend the use of computers. Following the lead of the U.S., the future offers even more specific targeted mailing. The capability exists for keeping records on opponents' voting record and more controversial statements. "Programming will only get better," says Gunner. "Anyone who wants to use a micro in the next election should get something IBM-compatible, preferably with at least a 10MB hard disc. After that put everything you can into the best printer you can buy."

Of wider significance is what computers can do for democracy. Much has been said about the potential of computers creating a Big Brother state.

Paddy Ashdown wrote: "Development will make surveillance of nearly all our personal activities by the unscrupulous or controlling state both easier and more tempting."

Yet the massive computational power of the Tory mainframe, to the communications ability of the Labour Telecom Gold nework and the data manipulation of the Alliance Polly, has made greater amounts of political information available to a larger number of people. From Tory blue to eco-

From Tory blue to ecological Green, campaign workers agree that the computers are only a tool.

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| SPREADSHEET (XP) | £37.49 | |
| COMMS LINK RS232 | £54.99 | (D) |
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* State which: BBC, Apricot, Brother, Epson, modem or Apple Mac

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| C128D | £370.00 |

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| EPSON LX86/800 | £287.00 | |
| EX800 | £550.00 | |
| FX800 | £448.00 | |
| FX1000 | £575.00 | |
| GQ3500 *LASER* | £1500.00 | (A) |
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| DDCM | £689.99 |
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```
MICRONET (c)                    80030012g        Op

>>Goto Room 15
You are outside room 15
>>Knock
You are admitted into the room
John Smith tells you welcome to the
conference. What are your views?
>>say Well I'm an ST owner, but then
I couldn't afford an Amiga!

John Smith says There's more Software
for the ST, and I'm an Amiga user.
John Smith says You shouldn' complain
- I sometimes wish I had an ST.

Peter Green says I think it depends
on your computing needs.
>>
```

● **Above, far right above and below: Teletalk frames.**

Teleconferencing systems, known in communications parlance as Citizens Band simulators after the public radio system which had a flurry of success a few years ago, are common in the U.S. but it is surprising that they are relatively unknown in U.K. communications circles. Spotting a potential gap in the market, the Telemap group which runs Micronet 800 on Prestel, opened its Teletalk teleconferencing system on Prestel in February. Initial indications are that the service, which costs three pence a minute above normal Prestel connect time rates, will be popular.

Before looking at Teletalk in depth, a few words about the Telemap group. Formed in 1983 as a joint venture between British Telecom and East Midlands Allied Press, the company now has a third partner at the helm, Bell Canada. Although all three companies are not involved actively in the day-to-day running of Telemap services such as Micronet, the *Shades* on-line adventure and Teletalk, they have representatives on the Telemap board.

In 1983 the group launched Micronet 800, the microcomputing information provider on Prestel. Since then, Micronet has grown in popularity until it now has more than 20,000 subscribers of a total Prestel subscriber base of approximately 90,000.

Since 1983, Telemap has diversified into several communications-orientated areas, including dial-a-joke and other value-added 0898 telephone services. The group is experimenting with an 0898-accessible viewdata service called Hotel California. No ID or pre-registration is required for the service, which is a pay-as-you-go system.

In contrast, Teletalk requires users to be Prestel subscribers – you must be a subscriber to access the service which is accessible on page 700999911. As with Shades, Teletalk is provided on a gateway basis. That means that while Prestel subscribers are linked on a local call basis to the nearest Prestel computer – in Birmingham or the London area – Teletalk is provided by a computer located eleswhere.

The Teletalk computer is located in the south-east of England and is connected via a special data link to each Prestel computer. The Teletalk computer is the same mainframe which provides the Shades adventure game and was programmed by Neil Newell, otherwise known as Hazeii the Coder, creator of Shades.

Once through the gateway page, users are requested to log in with an ID and password, details of which are provided on-line. Only one ID – and hence Teletalk name – is supported from a single Prestel ID. As with the main Prestel service, Teletalk passwords can be changed at will.

In use, Teletalk shows its Shades origins as it has a number of hidden commands analogous to those found on Shades. Once logged on through the gateway, users arrive at a reception desk, from which point they move in various directions to an interactive message board, a number of rooms and several other meeting areas.

Although Teletalk can be classed as a teleconferencing system, suggesting images of the business-orientated video conferencing service offered by BT business centres, the service is surprisingly informal. The software has been themed so that users can take a key from reception to one of many private rooms on the system. As with any modern conference centre, the rooms remain open and fully-accessible, subject to the key-holder's discretion.

When privacy is required it is available by locking the door. Other users who arrive at the room may then gain admission by knocking. Uninterruptible privacy is also available by pulling down the blind inthe room. That prevents anyone checking the system status – using the GLANCE or QW command – but has the possibly unwanted side-effect of other users being unable to page you.

Privacy is guaranteed on the system since, if the door is locked and the blind drawn, users other than in the room cannot see or hear what is happening. Access to the room is controlled by the keyholder in the room. Thirty private rooms are available for use, which is usually more than sufficient for the maximum of 16 gateway users from each of the seven Prestel computers round the country.

Communicating with other users, whether on a public or private basis, is carried-out by entering a logical sequence of commands, such as SAY HELLO or SAY TO FRED HELLO. The first of these commands would cause the words BILL SAYS HELLO to appear on other user's screens, provided they were in the immediate vicinity of Bill on the system.

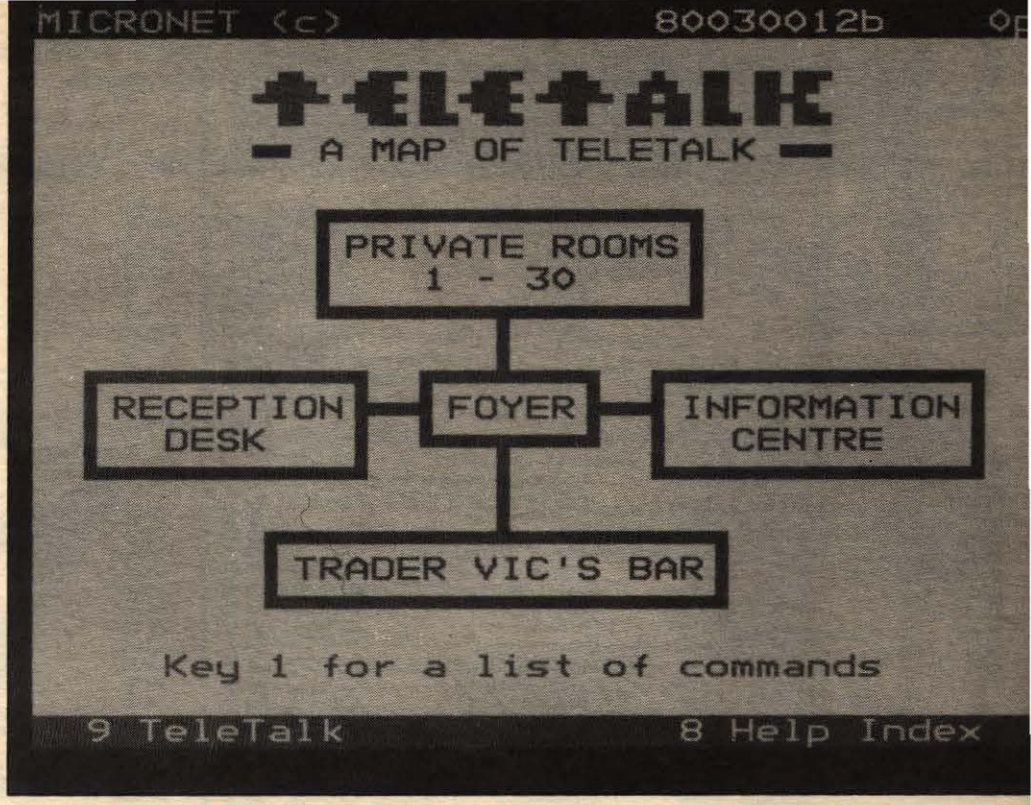
The second command is much more specific and causes the words BILL SAYS HELLO TO YOU to appear on Fred's screen at most points in the Teletalk system. The exceptions to the rule are when Fred is in a room which is locked and has the blind drawn. The other exception is when Fred is not logged on through the gateway.

In both cases, the originator of the message – in this case Bill – would receive an appropriate message on his screen. In such cases the fastest and easiest way to get in contact with other users is to send a short memo addressed to that user. When the user emerges from private chat or logs on next, details of the memo are flashed on his screen.

The memo facility is particularly useful for notifying other users to proceed to a given room once they have logged on. In this way, members of a discussion group would know that a private meeting was being held in a particular room, without alerting other Teletalk users to the fact.

While the rooms are ideal for private teleconferencing and semi-public meeting places, the main talking-point of the Teletalk system is Trader Vic's bar. It is treated in the same way that countless bars are used all over the world, a place to meet and chat. Although Trader Vic's is defined as a bar, it is a part of the memory of the PDP-11 computer on which Teletalk runs. Thus while it is possible to socialise, you can simulate such events only electronically. For that reason while many users will find it fun to experiment with the various facilities available, regular users will probably use only the directional and talking commands of Teletalk.

To that end, Trader Vic's is usually quiet at most times, except during the early and late evenings. Despite its electronic over-




# Talking on the telly

**TELETALK IS THE NEW ON-LINE CONFERENCING SERVICE ON MICRONET. STEVE GOLD OFFERS A TASTE OF THE NEW SYSTEM.**

tones, many parallels exist between Trader Vic's and a real pub. Most Teletalk users are an informal bunch, making and breaking chats with a minimum of formality and fuss.

As with the original computer chat systems seen on the giant on-line systems in the U.S., Teletalk is an ideal way to make new friends. Like the real-life situation, users will get out of Teletalk only as much as they put in. Lurking or hanging around saying nothing is not encouraged on the system. As with the U.S. CB simulators, lurking is not forbidden, but users operate their own code of conduct and tend to move away from quiet users.

Supporting that unspoken rule, Teletalk operates a user time-out. If no commands are entered at the user's keyboard for more than a minute the gateway into the Teletalk PDP-11 is broken. Users are then returned abruptly to the Prestel on-line environment.

Although such time-outs may seem unnecessary they protect users from remaining connected to the service accidentally if they leave their terminals connected overnight. Instances of players falling asleep at their terminals while using the Shades adventure gateway are not unknown, so this is a wise precaution, as three pence a minute can be costly as the night turns into morning.

Teletalk is still in its early stages. Like most other new on-line services, it is being fine-tuned constantly to cater for users' needs. If all goes well with the Prestel gateway a more formal teleconferencing service, operated on the same PDP-11 computer, will be offered to users of Telecom Gold, the business-orientated electronic mail system. The Telecom Gold gateway, because of the nature of its users, is unlikely to offer the gamesy image of the Prestel gateway. It almost certainly will be given a different name.

From the Prestel users' point of view, the Teletalk gateway is fun to use as a new social medium. I suspect also that many Prestel users will use the service as a direct alternative to dialling other users for a chat.

Computer keyboard chats are not so restrictive as users first imagine. Provided users are reasonably fast at typing, high-speed conversations are possible. Unlike the ordinary telephone, however, conversations can take place between several users at once.

With Teletalk, teleconferencing has arrived for the U.K. home user at last. Given its low cost, Teletalk success is assured.

It will be interesting to see what derivative services are spawned as a result of the new innovative service.

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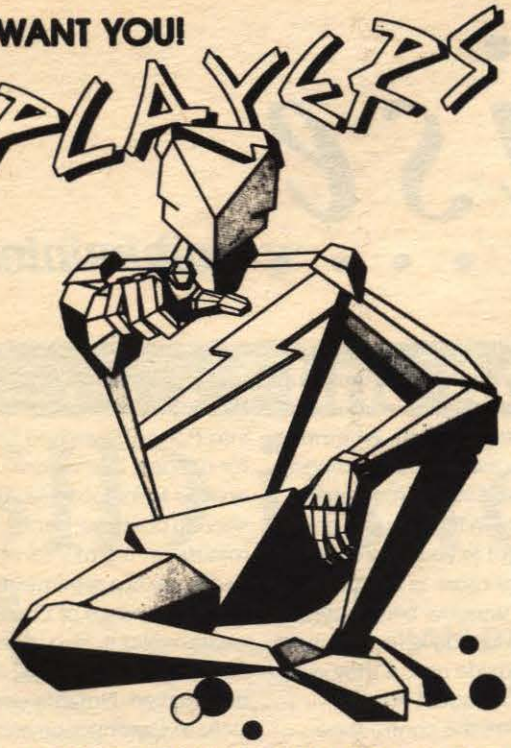

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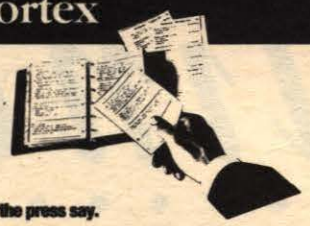

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# line noise



## Prisoners under modem surveillance

The Home Office is actively considering various high-tech schemes to enable more offenders to serve sentences out of crowded jails and also to keep tabs on those on bail. One of the schemes, revealed by BBC TV recently, showed the use of a special modem, placed in the offender's home, which links to a special tag worn by the prisoner.

Police or prison authorities would then telephone the prisoner at random and ask him to place his tag, which could be fastened securely to a wrist, into the special modem for verification. Other schemes have been proposed by a special body advocating the use of tagging devices, the Offenders Tags Association. They include radio tags which could be checked automatically from within a given cellular radio area, restricting the wearer accordingly. Modem tags are already in limited use in some American states and have also been the subject of experiment in Europe.

## Premium rate on-line services start

Two on-line services not requiring pre-paid subscriptions have started recently and both use BT premium rate tariffed lines similar to those used by such services as Dial a Disc. Hotel California, run by Telemap, is as its name suggests, a service modelled on an American hotel. The service is entertainment-orientated and features a hotel shopping mall, tele-shopping, a casino, competitions with cash prizes, horoscopes, a travel desk, agony aunt, night porter, and a link into the recently-launched TeleTalk tele-conferencing service.

Desire is another service, this time run by ME Penthouse men's magazine and, as you might have guessed, has an "adult" slant. It is interesting that Desire uses a host system developed from similar services on the French Teletel network.

Both services are viewdata-compatible and cost 5.06 pence per eight seconds during peak rate, or 5.06 pence per 12 seconds off-peak. Hotel California can be contacted on 0898 10 0890.

## Telemap launches tele-conferencing

Using a gateway-interfaced DEC PDP/11 on Prestel, similar to the one used to run the popular *Shades* multi-user game, Telemap has launched its new TeleTalk on-line tele-conferencing service. TeleTalk consists of a conference centre scenario complete with a reception room, 30 conference rooms and even a bar called Trader Vics.

The idea is that you can enter a conference room and take part in a private discussion with anyone else present in that room. If you want to dictate the topic of conversation you are able to book a room and hold a key to its door. Holding the key gives you special privileges. You control whether the room door is locked or unlocked to those wandering outside, whether a window into the room is open or not, and you can quieten everyone in the room to enable you to get in your words. If a particular room is unlocked and the window blind open, anyone outside is free to check who is inside and, if they wish, knock to request entry.

Besides the conference rooms there are also special rooms where notices can be left for others and there is also a memo facility. Users logged into the system are able to page others who may be present, too.

TeleTalk is accessible to Micronet members via a Shades-style viewdata PAD gateway but the service also forms part of the new Hotel California direct dial service. For Micronet users the service costs three pence per minute. It is expected that the service will eventually be tailored for business users.

```
>>Goto Noticeboard
You are by the noticeboard
>>Read Noticeboard

Amiga Conference: Room 5, 6pm
Is anybody interested in discussing
the football. Meet in the bar.
Amiga or ST - which is better: Room
15, 10pm tonight.
Game Talk: Room 25, 6pm tonight.
Beebs and things: Room 12, 8pm

>>Write Music Forum: Room 16, 11pm
You write on the noticeboard
>>GOTO Room 16

>>Open Door
```

## GreenNet peace network

If you are interested actively in world peace, social justice and environmental issues, a new on-line e-mail and conferencing service run by the non-profit organisation, GreenNet Ltd, could be worth investigating.

GreenNet, based in London and San Francisco, has a Plexus minicomputer hooked into Packet Switched Stream for national and world-wide access to its facilities. The service costs six pence per minute on top of PSS charges and there is a minimum monthly charge of £5.

GreenNet is also waiting for direct access telepone lines to be installed. Notable users include Greenpeace and Friends of the Earth. For more details, telephone Mitra on 01-490 1510.

## New Inmac PC modem

Inmac, the computer peripherals and stationery supplier, announced its own PC card modem, the Universal PC Card. The modem is capable of popularly-used speeds between 300 and 2,400 bits per second (V21 through V22bis) and has a number of useful features. It is Hayes-compatible. Of interest to the security-conscious, it has a built-in password/dial-back system for remote users.

The modem is programmed with the user's password and telephone number so that when the modem is contacted remotely and the password entered, it drops the line and dials back. Even if a hacker had the correct password he would need to be using the telephone pre-programmed into the modem to access it.

Even though the modem has a 30-day money-back guarantee, if you are not satisfied with its performance Inmac may not corner the market, since it is asking £795 for the device. Amstrad has already launched a sub-£200 V22bis card modem and dial-back password protection is now offered by several business host systems.

*from Ian Burley*

**. . . . . line noise feature . . . . .**

# SID is telling you

## IAN BURLEY REPORTS ON THE ACORN SUPPORT INFORMATION DATABASE, OTHERWISE KNOWN AS SID.

Anyone who has tried vainly to get through to the Acorn customer services department might be pleased to hear about SID, or Acorn Support Information Database. With millions of users of Acorn equipment, Acorn customer services telephone lines have usually been solidly engaged. The problem became so serious that the company commissioned Martin Grantham, its system information manager, to produce a dial-up comms service to enable Acorn dealers and service centres to access product news and information easily and reliably, so relieving much over-burdened customer services department telephones.

Work started in 1983 with the setting-up of a Communitel-based host system, tentatively known as the Acorn Information Database. With the Acorn financial crisis the service was abandoned. In late 1986 Grantham was given a mandate by Acorn mangement to start again and provide a new solution to the information distribution problem.

"Our Dutch distributor, ECD, had a single-user viewdata host system called Poseidon which Acornsoft had adopted as an official product," Grantham says. "Our mandate required that we use Acorn product wherever practicable, so Poseidon was the obvious choice."

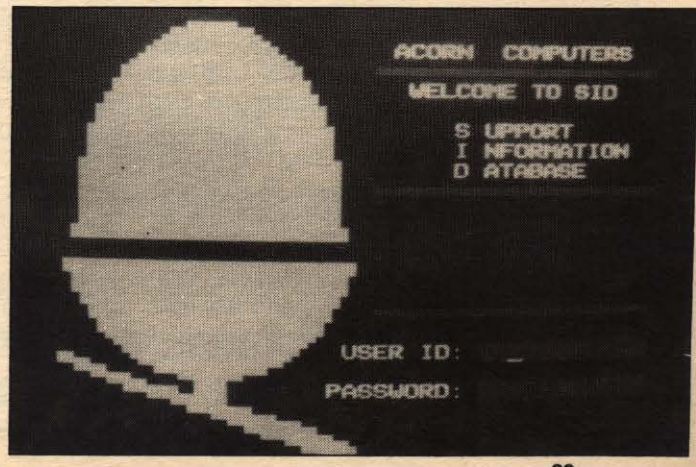
Poseidon has a very important ability to talk to most of the various Acorn filing systems from the ordinary DFS through ADFS and, most important, the Econet network filing system.

Grantham took Poseidon and Econet, married them with a little help from the Midland Bank/Thomas Cook Fastrak network, and SID was born. The system has two Archimedes and seven Masters and Master Compact CPUs, the BBCs catering for four Fastrak access lines and three direct dial lines. Grantham explains that there is plenty of room for expansion if required. Access is only at 1,200/75 baud, though Fastrak options include 1,200/1,200 and 2,400 (V22 and V22bis).

"Originally we investigated PSS and Fastrak for wider local access and as we researched the two systems it soon became clear that Fastrak was much more flexible and helpful to our needs and then the BT strike came along to tip the balance finally in favour of Fastrak," Grantham says.

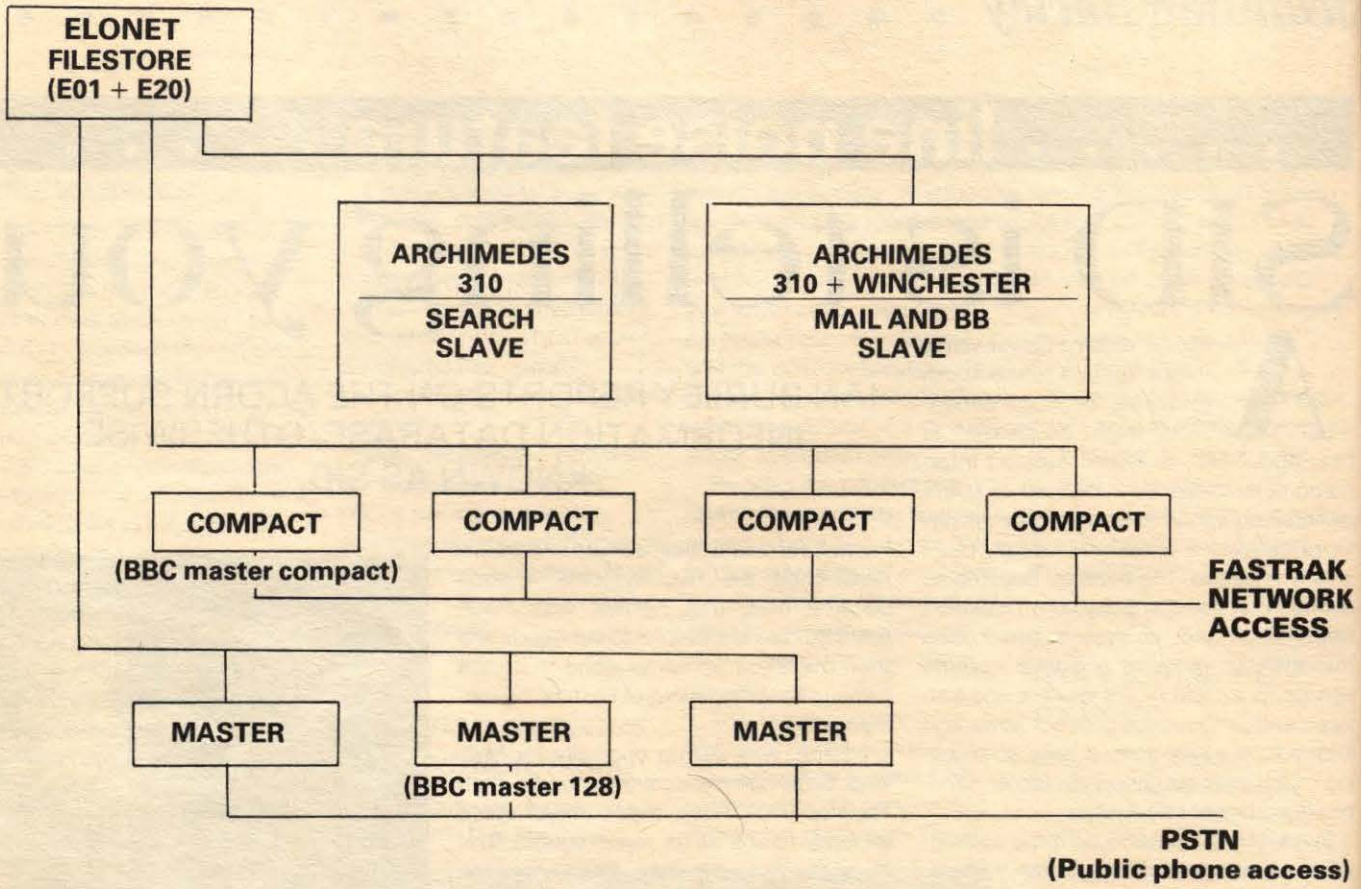
Fastrak was set up originally for Midland Bank communications needs, then Thomas Cook Travel made use of spare capacity to link all its travel agents. The 75-node network has been growing steadily ever since.

The SID system interfaces to Fastrak via an X25 kilostream link and a reverse PAD to the Fastrak node at Peterborough. "The advantage of SID is that each user




● **Right: SID opening menu. Above left: Search menu. Above right: The SID equipment rack.**

## STRUCTURE OF S.I.D. NETWORK




● **Above: Diagram showing SID network.**

talks to his own CPU – or BBC Master Compact, whatever, in the Econet network. If we have a CPU failure, only one user should be affected," Grantham says. Part of the Acorn agreement with Fastrak guarantees a four-hour turnround of network system faults which should ensure good reliability on the system.

Archimedes are hung on the nework as fast slave processors to the individual Poseidon host-running CPUs. One slave Archimedes has the main task of creating viewdata index frames in real-time according to search parameters received from individual CPU stations.

"We soon realised that it would be very desirable to distribute text files, such as sections of manuals or applications notes. This is accomplished by holding a store of pre-formatted telesoftware files containing those documents and notes. A user who might need some information about BBC test equipment, for example, could find the relevant information by entering keywords into a special parameter response frame on SID, e.g., BBC TEST EQUIPMENT DISC, and the host would send those parameters to the Archimedes slave.

"The relevant files are found and indices created as viewdata frames, which are then sent back to the user's station. The user can then choose which file or files are needed and download them using an ordinary viewdata CET telesoftware downloader."

Once text files are downloaded at the user end they can be loaded into most word processors as ASCII format text and then printed-out or stored on disc. Program files and even bit-mapped screen files have also been available on SID. Incidentally, the Archimedes search and index-created programs were all written in Basic – by Grantham's only assistant on the project, Phil Colmer. "For us the project has been achieved on virtually a part-time basis," Grantham explains.

He says that the document database holds 3-4MB of text files but this could eventually expand to something in the region of 60-70MB.

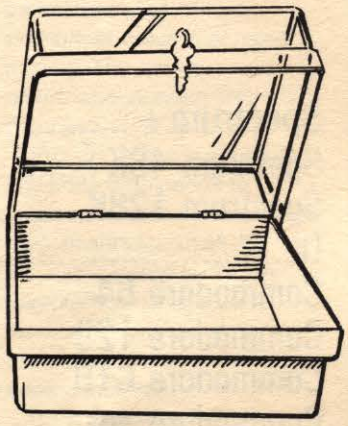
Another Archimedes slave is being developed to provide a powerful mail facility for users with message scanning, forwarding, bulk mail and other facilities such as closed user groups are also to be offered. Several school authorities have already shown interest.

SID is a remarkable system in that it encourages the use of on-line communications to avoid the sily bottle-neck of telephone calls being handled by the old customer services offices. Most information being sought originally by callers was admirably suited for distribution by a SID-like system. SID is also remarkable because it shows the versatility of the Acorn Econet networking system. Considering its complexity, the SID hardware outlay is remarkably economical, costing less than £10,000.

Although SID was conceived originally for Acorn dealer and service centre use, the system caters for anyone willing to pay the annual £40 subscription, though Fastrak increases the on-line charge to eight pence per minute. If you are interested in SID you can log into a demonstration account on the system by dailling 0223 243 642. That gives only a limited view of what is possible, though you can request further information or even registration on the full system via response frames.

SID is such a good idea that it cannot be long before many more companies adopt similar systems to satisfy a customer base hunger for product information and news.

# GOLD MASTER



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| PC-Users | Olympia – London | — | 28/30th June, 1988 | 70 |
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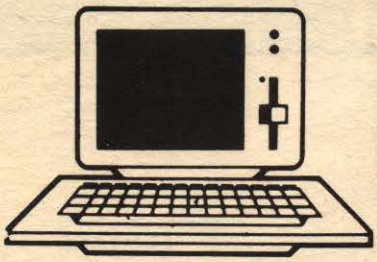

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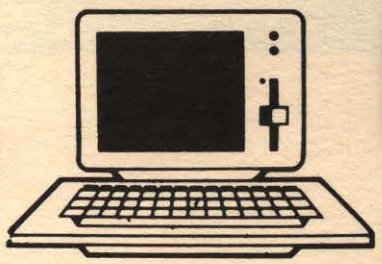

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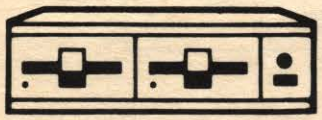

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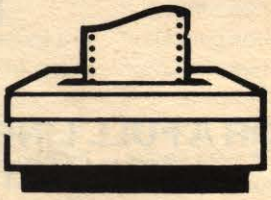

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# FRONT DESK

## Go to work on a PC

Next Base has released an ingenious PC package to assist planning the cehapest and quickest way of travelling from A to B.

Autoroute automatically plans the shortest, fastest and quickest routes, and can take account of average driving speeds, roadworks and stopping off points. The package includes maps and written route instructions, and covers the entire United Kingdom except Northern Ireland.

Autoroute costs £130 plus VAT, and is available for use on all IBM and compatible PCs. Further information from Next Base on (0372) 69011.

● Autoroute from Next Base.

## Packing a Psion

Transform has brought out a handy Filofax-type wallet for the Psion Organiser hand-held computer, designed to hold the Organiser and plenty more besides. Also available are two software packages – *Obase and Mail List.*

The case is made from calf leather, and holds the Organiser, a spare battery and Datapak, six credit cards, two pens, a pocket for notes as well as a 16mm six-ring binder to hold maps, sketches and other information

Obase can create databases and print out records on continuous Filofax compatible paper, while Mail List is a PC-compatible package which can print name and address labels as well as the same information on 80, 132, 255-column and Filofax paper.

The wallet costs £69.95 although the Organiser holster is available separately at £39.95, the Datapak and battery case at £12.95 and the waterproof nylon case at £10.95. Obase costs £59.95, and Mail List £49.95. Further information from Transform, 24 West Oak, Beckenham, Kent BR3 2EZ, telephone 01-658 6350.

## Protext additions

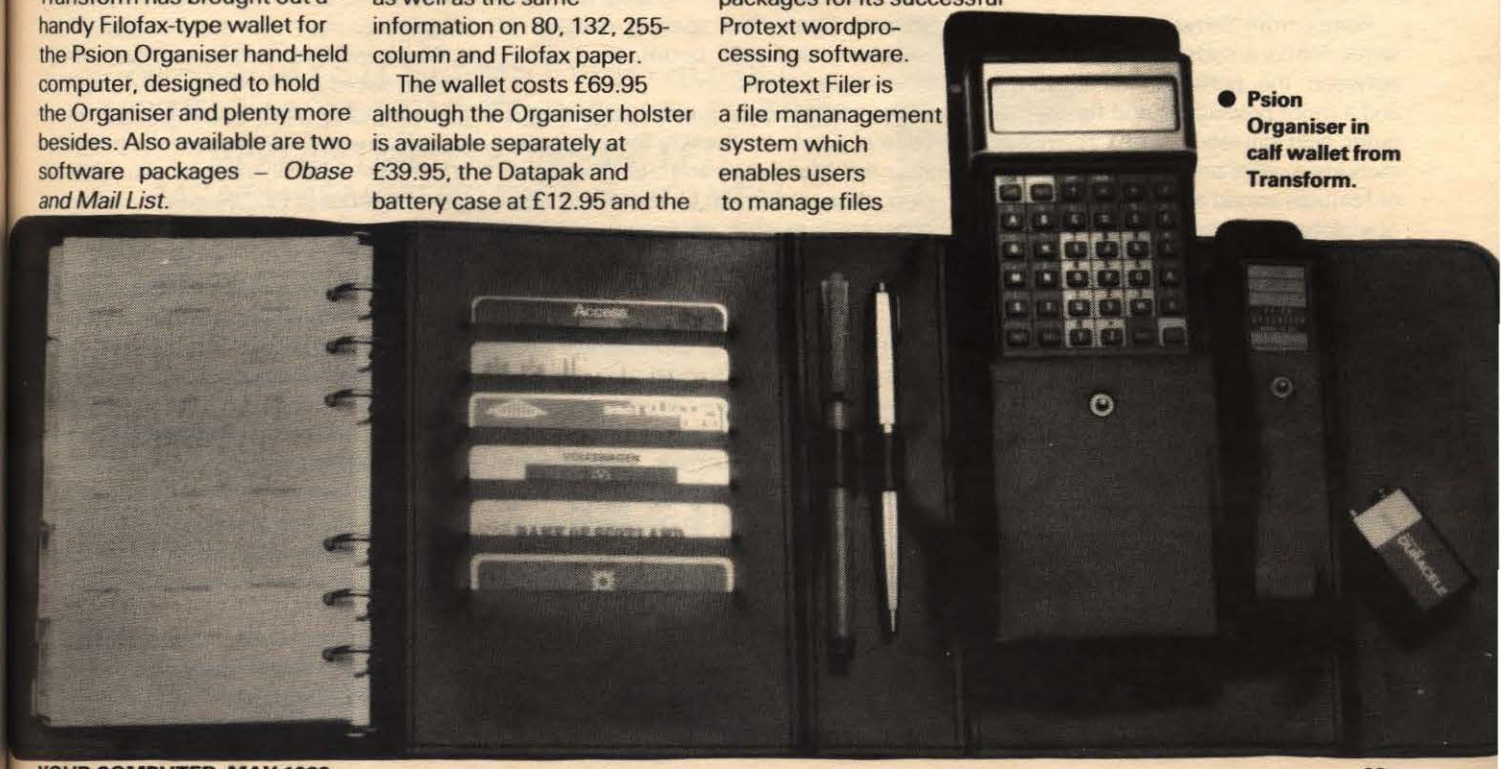
Arnor has announced the release of two additional packages for its successful Protext wordprocessing software.

Protext Filer is a file mananagement system which enables users to manage files from within Protext, search for data, print selected records and print a summary of data.

Also included is a flexible program for file sorting – including alphabetical or numerical, column or name sorting. The package also offers label printing and standard letter options.

Protext Office is aimed at any body who needs to produce invoices or uses data files. In addition to all the facilities offered by Protext Filer, Office can create full invoices as well as statement templates and account name editing facilities.

Both packages operated from within Protext, and are available for Amstrd CPC 464, 664, 6128 with Protext and Promerge; Amstrad CPC 6128 with CP/M Protext; Amstrad PXCW 8256, 8512 and 9512 with Protext; IBM PC and compatibles with Protext and Atari ST with Protext. More information from Arnor on 01-684 8009.



● Psion Organiser in calf wallet from Transform.

Title: Portex Price: £114 inc VAT Machine: IBM PC/compatibles Publisher: Showerings Business Systems (01-922 8821).
Title: PC Organiser Price: £59.95 Machine: IBM PC/compatibles Publisher: Triangle Publishing (01-636 4475).

Organisation is a modern obsession; it is a standard by which we all judge one another and, to some extent, expect to be judged. There is obviously a large market for any aids which can assist and appear more organised and lessen our guilt about the 200 things we forget to do each day. The pinnacle of the market for products which underpin our inadequate memories and conscience must be the Filofax.

Increasingly people find Filofaxes full of useful items such as maps, expense claim forms and many other adjuncts to the more normal diaries and address books.

There are entirely obvious benefits to be obtained from merging all the names, telephone numbers and diary planning needed into one computer database. First, a computer can access any name or number far faster than the human thumb and obviously searches can be done for a specific name or reference. Second, the volume of information which can be stored and retrieved can be thousands of times larger than can be scribbled into A5 file pages.

Third, given that there need to be links between diary planning exercises, an entry should need to be written only once, as opposed to entering an appointment, once on the month-planning page and again on the daily-appointments list. This is a fundamental problem with written diaries.

*Portex*, from Showering Business Systems, forms a satisfactory juxtaposition between the portable, fashionable fax and a more practicable and flexible computer held dataase. Portex is an extremely impressive product, providing a host of features aimed at driving the contents of a Filofax, grouped under the three main operations of the address book, diary and word processing.

Portex allows the user to build and maintain a series of address books, each containing contacts relating to particular areas of interest, such as restaurants, business contacts and the like. The usage of the address book is, like any other part of Portex, through a menu system where picks are made with the cursor keys and carriage return. The menus have been designed for ease of use. The difficulty in using Portex is in the complexity of what you can achieve with the product.

Broadly, the system works on the basis that one address book and diary are open at any time; searches can be made across either the diary or address book at any stage, or across both. Portex has been written to have a very broad appeal and usage; it should certainly not be regarded as merely a tool to produce Filofax-compatible output and this versatility highlights the necessity to get into the product as quickly as possible. The time an average user would take to familiarise with Portex as a total, all-singing, all-dancing system would probably be some months, because of the size of the system.

Showerings has put a great deal of effort into making the manual as readable and useful as possible. The glossary and overview sections are invaluable aids to understanding how the many parts fit together but the most productive time which can be spent is one hour or so using the menus and investigating the demonstration diaries and address books supplied.

The diary planning process is easy, once the function key definitions have been mastered. Appointments are described by day and time and then the type of appointment, which can be either normal, repeating every week or so, or nagging, which will appear each day until they are dealt with. From that information Portex can produce daily, weekly and monthly summaries and to-do lists.

The word processing is also function-key-driven and incorporates many features of full-blown word processing packages, especially mail merging from the address book. The spelling checker is excellent, certainly better than many other word processors.

The address book provides all the functions and links necessary for integration with the Mailmerge and the Diary scanning, although it must be said some functions are less than obvious to achieve, despite the ease with which they are depicted on the help screens.

It is very important not to underestimate Portex as a professional business tool. There is a multi-user network version designed as a key administration tool in areas of business where time management is very important, such as sales management. The idea of merging many people's diaries and supplying updated contact databases obviously has an enormous appeal. This brings us back to the feature which makes Portex so different, the ability to output on to Filofax-compatible pages. The technology provided in Portex to support a huge range of printers is very impressive, from the most basic Epson dot matrix to the most modern laser printers. The documentation is so good on this topic that I also learned a good deal about how printers are driven.

Portex also includes many other features which prove it can be used as far more than a toy. The facility to import data from external systems indicates a desire to integrate not only in Portex but with whatever other systems the customer may use. Portex is an ideal tool for personal and business management, which proves its worth as a PC-based package, as an output to Filofax systems and as an integration tool for multiple users. All those functions are provided as standard but not at the expense of the cosmetics, which will always mean more to the user.

In comparison, *PC Organiser* makes no pretence to providing Filofax-type outputs; it is clearly aimed at providing a smaller, faster, less-complex organisation system. That impression is given from first loading the product, PC Organiser, which is on one diskette, with a far slimmer manual than Portex. The screens are more colourful to use, driven by memory-resident, pop-up windows.

PC Organiser was developed by Clasma Software and is sold in the U.K. by Triangle Publishing. The manual is an easy-to-read and understand document, certainly easier to use than the product is in some parts.

PC Organiser contains all the main functions of diary scheduling, address card indices and integrated word processing.

All the work is done in memory, which is then saved to disc under the control of the program, which makes the basic operation very fast; because the program is loaded resident in memory you can Hotkey in and out of PC Organiser whenever it needs to be used.

The diary system can take some time to understand but it is very functional and allows for many more facilities than I expected. In addition to normal diary scheduling, PC Organiser can work as an alarm. The alarm ended the nasty habit of forgetting my car is parked on a meter and I did not have one parking ticket in a week. That alone can justify the cost of the product in less than a month and is my argument for buying PC Organiser, besides several other very helpful and productive features.

The address Card Index system is exceptionally fast in operation and for learning. PC Organiser makes no bones about the Database used to store the

● **Portex can output information into this wallet file.**

information and that is linked to a file card index of general information. Both of those databases can be accessed simultaneously and searches can be done across both to pick-up linked references. The linking is called a RECALL.

Letterwriter is driven entirely from the Address Card index and can enable very rapid letter production from a standard template, which can also be customised. Letterwriter allows for documents of up to five pages but PC Orgniser has Word Processor for bigger and document-type files. Any any stage a SHOW can find all references to a specific word, with only one keystroke. It will show all occurrences across the Diary Day Note, Address, File Card, Letter or Word-processed documents, maintaining the integrity of the whole system, given a change of name or other key information.

The Auto-dialling option, when linked to the modem, is a logical extension and can save large amounts of time finding telephone numbers, dialling and then trying to track somebody. The process is reduced to a search on the address cards and then one keystroke, which is literally only one or two seconds' effort. This gives PC Organiser a level of gloss Portex did not have in appealing to the executive-type user. Unfortunately that impression is somewhat confused in PC Organiser when you can readily fill the screen with hex-ASCII conversion tables, I am sure these will prove invaluable to somebody but not to me.

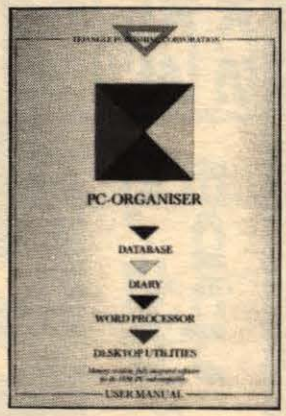
PC Organiser is a very competent and

**NOWADAYS IT SEEMS EVERYBODY IS NOTING ANY DETAIL THEY CAN – DATES, APPOINTMENTS, INSIDE LEG MEASUREMENTS. NICK WOOLVEN ASSESSES TWO PACKAGES WHICH HELP PUT ALL THIS INFORMATION ON TO YOUR PC.**

efficient system which is well-integrated and easy to use. The Automatic dialling and Diary alarms are excellent and justify the product as a completely desk-based personal organiser.

Portex, in contrast, lacks some of the gloss of PC Organiser but provides two other major benefits – the ease of producing quality paper copy which is portable and the professional multi-user environment.

Both systems are relatively easy to use and provide major benefits of efficiency and integration over paper-bound Filofax-type organisers.




● **PC Organiser has been bundled with the Amstrad PPCs.**

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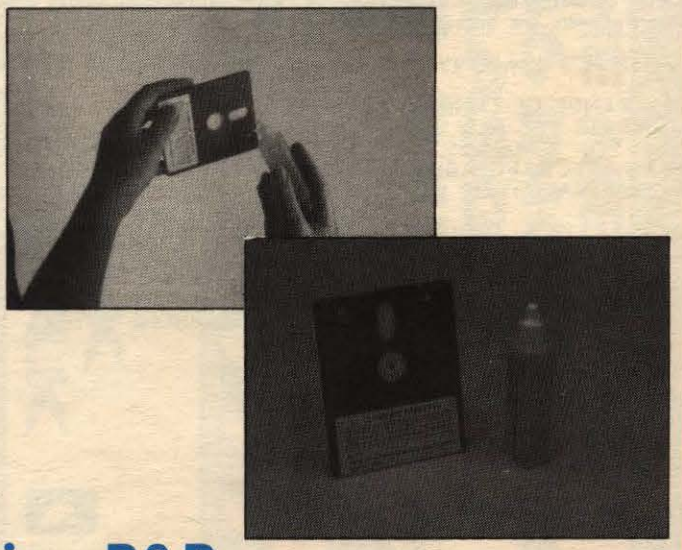

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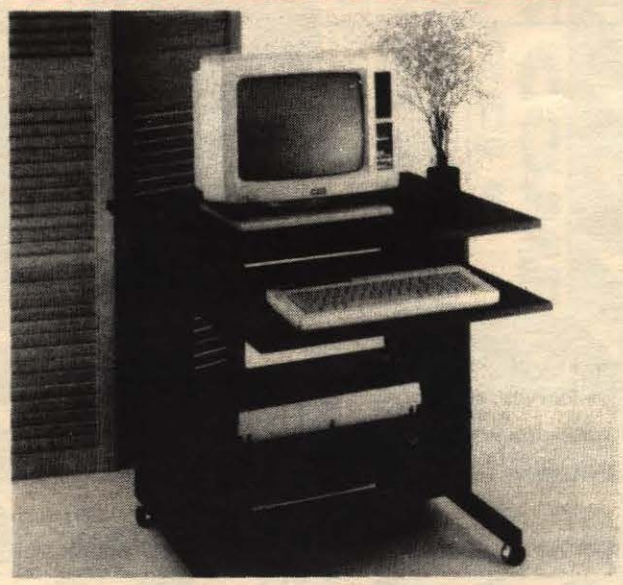

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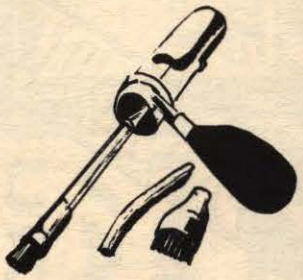

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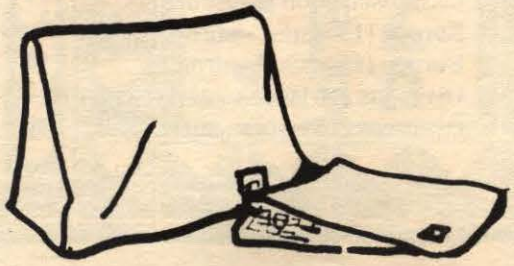

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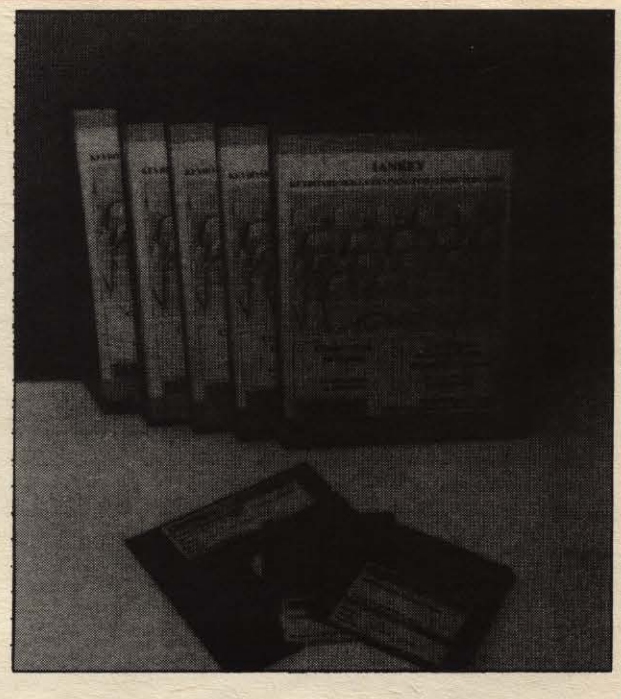

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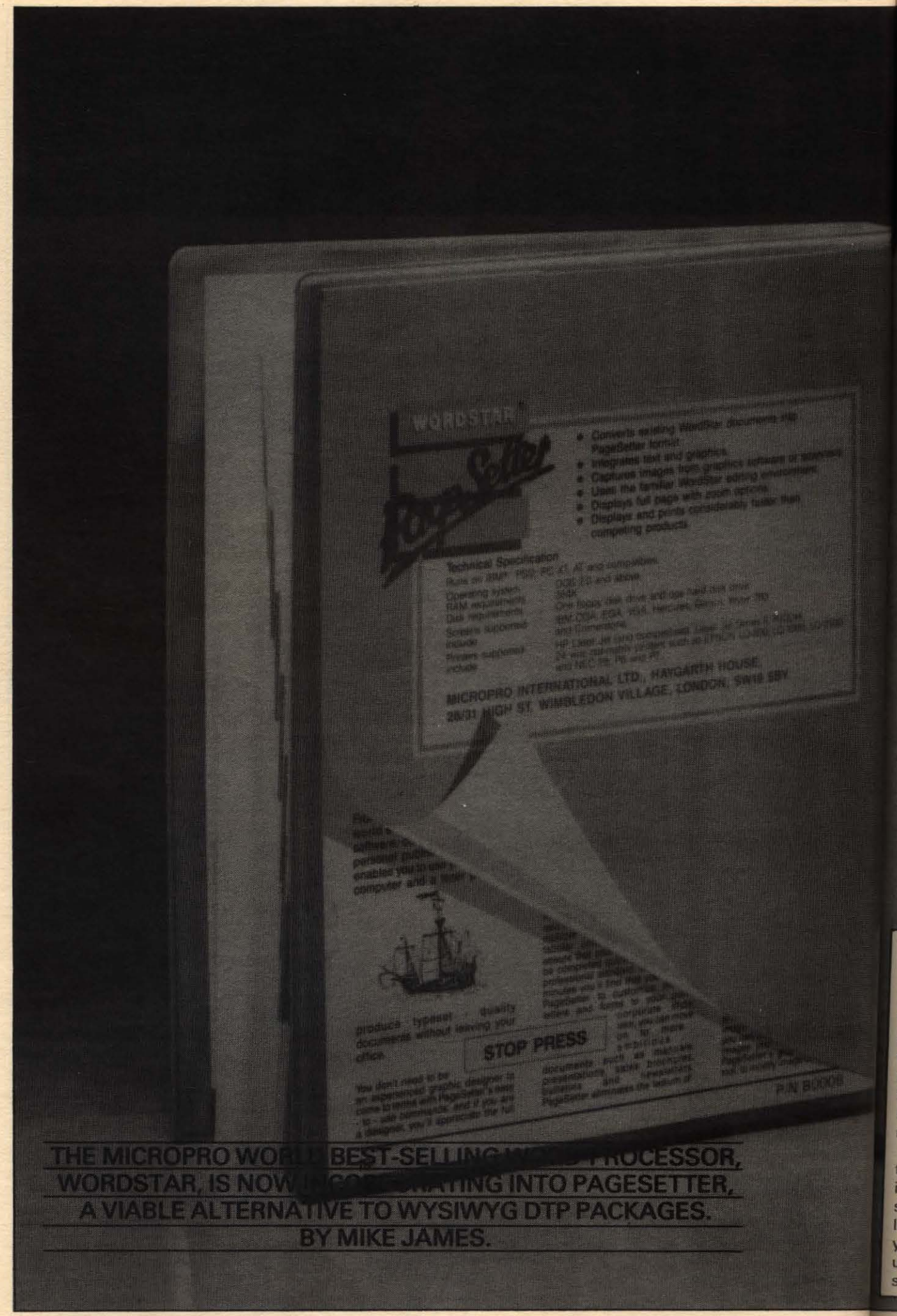
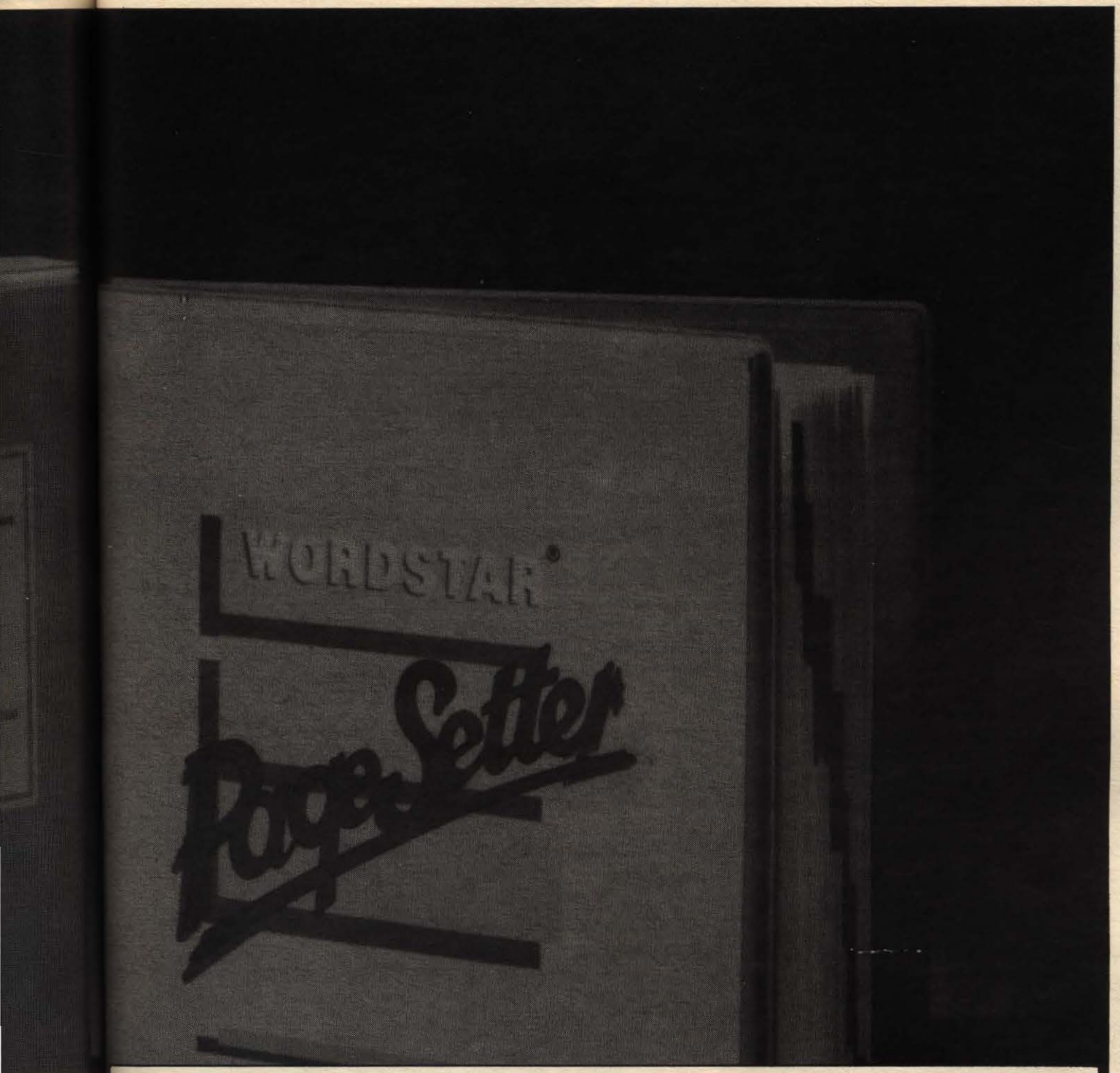



# THE MICROPRO WORLD'S BEST-SELLING WORD PROCESSOR, WORDSTAR, IS NOW INCORPORATING INTO PAGESETTER, A VIABLE ALTERNATIVE TO WYSIWYG DTP PACKAGES. BY MIKE JAMES.




PageSetter takes *WordStar* into the booming and highly-competitive world of desk-top publishing. This is news in itself but *PageSetter* also takes a very different approach to DTP from the existing and well-established alternatives. If you are an existing WordStar user, PageSetter would seem like a natural route into DTP but even if you are not it is still worth considering.

Most DTP packages attempt to live up to the WYSIWYG ideal while remaining interactive. What this means is that they show you what the finished page will look like as well as providing ways of allowing you to change it while looking at it. If you use GEM DTP or *Ventura* you are presented with an image of the page you are composing and you can alter it using the mouse to select, drag and generally modify anything that you wish. In this respect such DTP packages try to mimic the way you would shuffle pieces of paper to try to achieve a page layout manually.

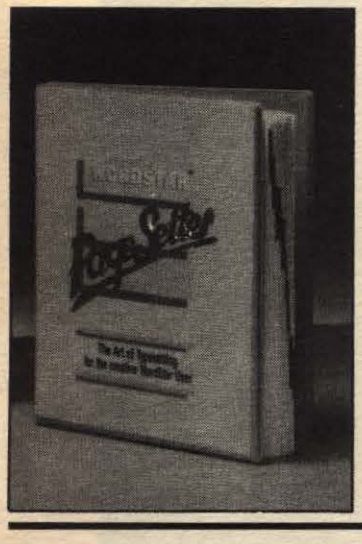
The level of interaction sounds like the ideal way to work until you experience the limitations of the hardware. A DTP machine must have a high-resolution graphics screen, plenty of memory and a large capacity disc. To manage all those resources and give a good response time also needs a very powerful machine. If you have ever seen an Apple Mac DTP system trying to keep up with the demands of a user the sluggish response of many PC-based system seems more reasonable. The 68000 in the Mac is generally recognised to be much more powerful than the 8088 inside the standard PC.

Many people claim that you need at least an AT or really one of the new 80386 machines just reaching the market. The need for powerful PCs has been avoided by PageSetter simply by taking a step back into the past.

PageSetter avoids the need for a powerful computer by abandoning the level of interaction offered by other WYSIWYG DTP programs. Instead of allowing you to play with the positioning of blocks of text interactively it allows you to place typesetting commands in your text. You can view the results of the commands on the

screen and print the result when you are satisfied. If you are not satisfied you have to go back and edit, using WordStar, the commands or text of the document.

In many ways PageSetter is like an extension of the usual WordStar dot commands still used to control many aspects of page layout. In the early days of word processing almost all layout instructions were given using embedded commands and you saw your final document only when it was printed-out. That was clearly unsatisfactory and you might think that by the same token the PageSetter approach is also unsatisfactory but there is one important difference. PageSetter does as much as possible to make the scheme work by making the swapping between PageSetter and WordStar automatic and by displaying the results of commands on the screen as fast as possible. That still does not give you an interactive facility but it speeds things to the point where you can make alterations fast enough to produce what you want in reasonable time.



*"If you want to do really complicated things such as layout of a magazine, PageSetter really is not suitable. As an add-on to WordStar and for the simpler but very common DTP applications I can recommend it."*

Installing PageSetter is easy but at the moment it supports only a small set of 24-pin and laser printers – HP LaserJet, HP LaserJet Plus, Kyocera, Epson LQ range, NEC Pinwriters and Ricoh. If you have a LaserJet or another laser printer which can emulate it, be warned that you also need either the F or B font cartrdiges. PageSetter needs a PC with a graphics card fitted but you do not have to tell it which type; it can work it out for itself. Unlike other DTP programs it does not need or make any particular use of a mouse or any other pointing device.

Once you are in PageSetter everything is menu-driven. You can elect to use WordStar to create a standard document file containing raw text for input to PageSetter. The next step in achieving a page layout is to convert the document to PageSetter format. The conversion leaves the WordStar document intact and creates a new .PSF file of the same name. The existence of two files, one a standard WordStar document and one containing PageSetter layout commands, could cause problems if you do not keep track of any changes you make in one but not in the other.

Once you have the converted file you can select the display option from the menu and see your text on the screen in a default layout. As much as possible of the WordStar formatting and text styles in the original document are preserved in the PageSetter document. Centred lines are still centred, bold text is bold and so on. In the unlikely event that the default layout is satisfactory you can go straight to a printout but if it is not you have to select Edit.

That takes you automatically to WordStar, where you can enter the necessary formatting commands. If you do not like the default font you can select a new one by /SFnn where nn is the font number. A different left margin can be set by using /MKPPpp where PPpp is the width of the margin specified as PP picas – one pica equals one-sixth of an inch – and pp points – one point = 1/72 in. – and so on.

## SNAKE COLUMNS

You can set multi-column using a range of commands. For example, /MC (1000,0800,0500) defines a three-column layout with widths of 10, eight and five picas. You can define snake columns, where text flows from one column to another, or tabular columns suitable for tables. You can also draw horizontal and vertical rulings at any position and in any thickness but this is the extent of the graphics supported unless you have a graphics package or a scanner.

Most DTP packages solve the problem of integrating graphics by supporting one graphics standard or another. GEM DTP will read in .GEM and .IMG files created by *GEM Draw* and *Paint*. The problem with this approach is that there are a number of graphics standards and this means that your choice of DTP program determines which graphics programs you can use. PageSetter is exceptional in that it can incorporate graphics from any program you use or might use in the future. It does so by the simple expedient of intercepting any output on its way to the printer and saving it in a file.

All you have to do is select the PageSetter image capture option and then use your graphics program, or whatever, completely normally. When you print-out your final design nothing will appear on the printer. Instead, all the output will be sorted on disc ready for PageSetter to read. This simple facility means that you can capture, you can position your images anywhere on the page and make the text flow round them. This is a very easy to use and powerful way round the DTP graphics problem.

Using PageSetter efficiently certainly takes a level of skill beyond the interactive DTP programs. When you start to use it I guarantee that you will make so many mistakes that it will take you an unreasonable time to finish what you are doing. Once you have had a few successes and created the kind of layouts you want to use, things should become easier. You will still spend time displaying and editing your documents, tinkering with things until everything is correct but, in principle, it is possible to write all the layout commands needed in a single edit and go straight to printout.

## ALTERNATIVE APPROACH

If you are a careful and meticulous worker, PageSetter is made for you. On the other hand, if you find working out and typing commands difficult perhaps a more interactive DTP program would be better. The point is that PageSetter has the potential to be faster than any interactive program, but only if you get everything correct first, second or, at most tenth time.

I cannot recommend the PageSetter manual but it has a good range of examples which really illustrate the kind of thing you can do with it – letterheads, memos, invitations, publicity sheets, manuals, business forms and simple magazines. If you want to do really complicated things such as creative layout of a magazine, PageSetter really is not suitable. As an add-on to WordStar and for the simpler but very common DTP applications I can recommend it.

PageSetter presents an alternative approach to DTP which is ideal for existing WordStar users who want occasionally to produce typeset documents. By sacrificing immediate interaction with the user it enables DTP to be tackled successfully on the less powerful 80 machines such as the original IBM PC/X. Using embedded commands in the way PageSetter demands must in the long run lose in popularity to interactive DTP programs running on fast machines but until that day arrives PageSetter will be a viable alternative.

# C=Z

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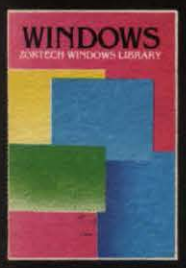

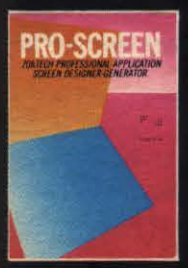


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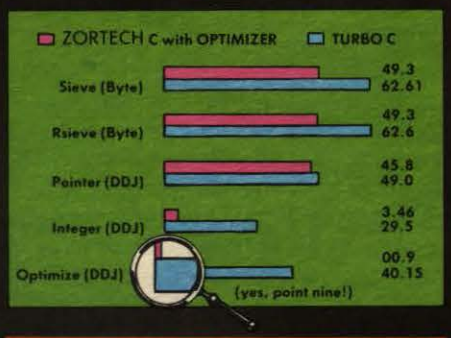


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***"Most people in broadcast television look at the piece of hardware and say 'what does it do? Oh, it does that; fine, we will have that for the show'. We work the other way round. We say, 'what image do we want on the screen' and, having decided, we try to find some hardware to do it. As it happened there was no hardware around, so we had to adapt an Amiga", says Keith MacMillan, executive producer of Network 7.***

In the last few years there has been a dramatic increase in youth television. One of the most successful shows to emerge is *Network 7,* which later this month enters its second series. Network 7, broadcast on Sundays, offers a mixture of news, views, comment and music and is pitched at 16-24-year-olds. The show is strong in the way images and pictures are presented. One of the best-kept secrets is the fact that all the graphics seen are produced using an Amiga computer.

MacMillan explains how the Amiga was chosen. "The crucial factor in deciding to use the Amiga was the way we could convert the Amiga output to meet broadcast specifications. If we wanted to use the Atari ST we would have started from scratch. With the Amiga there was some existing hardware we could use, called *Gemlock;* although it does not produce a broadcast signal we could still get at it to make it do that.

"There was no equivalent device for the Atari at the time, so we decided that the Amiga was more adaptable to broadcast television and went for it."

Another deciding factor in the choice of the Amiga was the software packages available. "There was more software I could buy off the shelf which was suitable for what I wanted to do". MacMillan says. He explains the packages Network 7 uses to produce graphics.

"We use *Deluxe Paint 2, Video Show* and our own house management software to make it broadcastable and to access it easily. We had some software written specifically for us.

"Last year we had three Amiga workstations for composing the graphics and we had an Amiga and necessary broadcast gear in each edit suite. The graphics artists and designers could design whatever we needed and hand the director a floppy which she would then put on to the computer in the edit suite. All we ever do is transport floppy discs," he says.

MacMillan saw the benefits the Amiga could make instantly. As well as producing stunning graphics which are ideally-suited to Network 7, the cost of the machine is much less than computer graphics machines normally used for television. A machine such as the dedicated Quantel paintbox costs more than $250,000 while the Amiga and necessary software can be bought for less than $2,000.

Apart from its stunning graphics capabilities, the Amiga has also produced some breathtaking music but the area is not of great interest to Network 7. MacMillan comments: "Although in domestic terms it has great potential for sound if you compare it to what is available at a professional sound studio at a reasonable price, then it is not really worthwhile."

Last year Network 7 had two full-time designers to produce the graphics. "Normally graphics in television is a service industry to the programme; we were lucky we had two dedicated people working on the show. We were so good on the graphics because we had people working on it all the time."

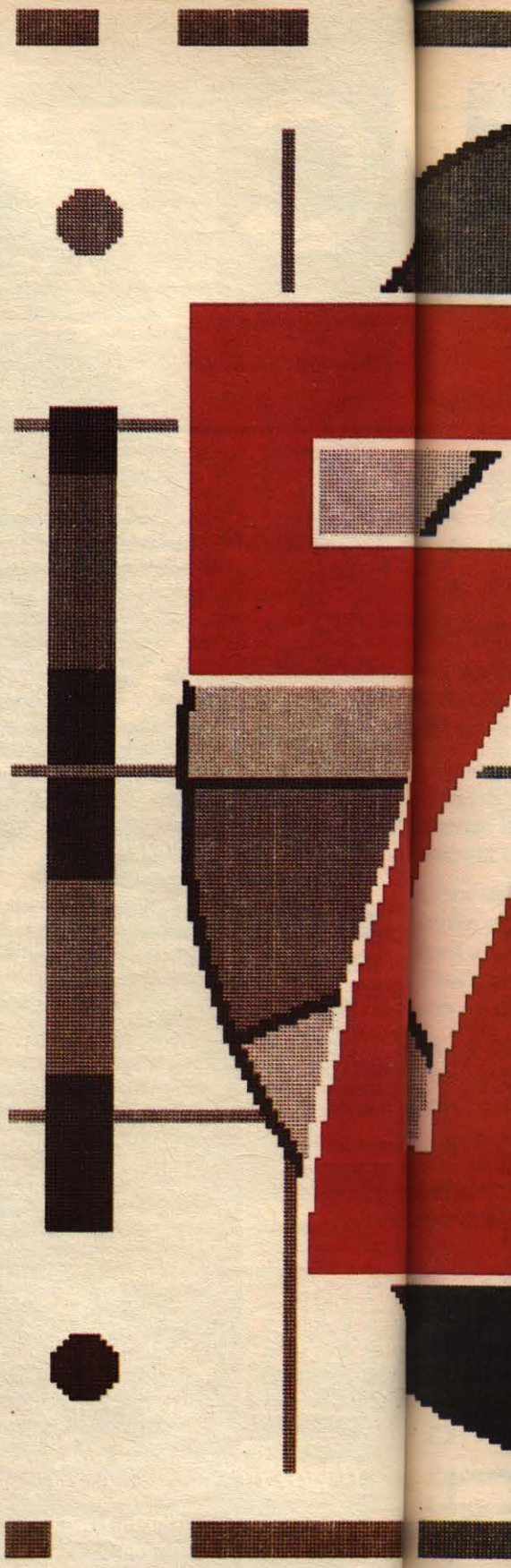
The new series will have another member of staff working on the graphics. "We will have three people full-time because we want to move from where we were last year," MacMillan says.

"We have only four days for a two-hour show and the stories are decided on a Wednesday. The graphics cannot start to be done until Wednesday afternoon, so we have until Saturday to do all the graphics."

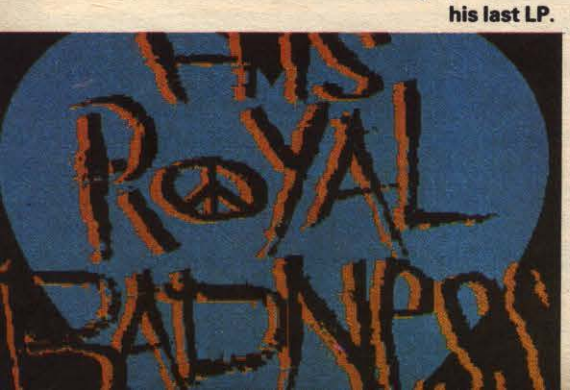
Another machine MacMillan looked at was the Archimedes but he says there is not the depth of software available that there is available for the Amiga.

The graphics only add to the strong Network 7 editorial policy – they do not make it. What is in the pipeline for this year? "We shall be hard-hitting and have a different style of presentation. It will be a new look. One of the things about Network 7 is that it has to move on – it was a revolution in current affairs terms," he says.

"We went into it and discovered that if you sit and watch most current affairs programmes they are really boring. We made it into a current affairs rock and roll show and used plenty of music, fast graphics and multi-imaging."



**● Below: This frame from a report on Prince echoed the graphics from his last LP.**



● Above: The show's graphics have
reflect the seriousness of reports like th
one on child abus

# PICTURES ON THE BOX

Report by Leslie Bunder. Photos Network 7.

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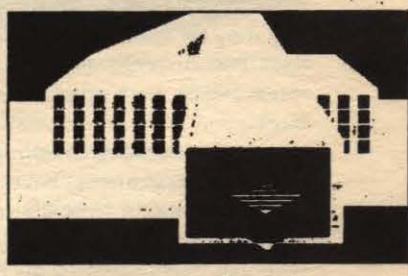

When Commodore sent out the first issue of "Kickstart — the European Technical Journal" it was hailed as the first thing to explain the machine in a way which was comprehensible to a human being, instead of just to another Amiga!

The Commodore Amiga is probably the most advanced wide-market Microcomputer ever produced, both in terms of hardware, and in terms of the system software. The Amiga uses a state-of-the-art message-passing multi-tasking Operating Environment — while this is responsible for a lot of the machine's power, it is also a rich source of confusion to programmers used to comparitively primitive micros.

Aware of this, Commodore commissioned Ariadne to produce the "Kickstart" journal, which was distributed to all European developers. Particularly well received were a series of feature articles, which explained the key concepts of the machine in a way which didn't assume you knew about them already, and which were designed to complement the official documentation as much as possible.

Now with the release of the A500 another group of programmers are eagerly approaching the Amiga. Ariadne have therefore taken the feature articles from Kickstart, revised and updated, them, and added new material appropriate to a wider audience — the result is this book.

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WORD UP

# Word searc

Almost every computer in the land will be asked to become a word processor at some time or another. It is just a case of buying a program. There is a bewildering range of packages on the market and when you look at the prices you may be surprised; you can pay less than £50 or more than £500. With so much choice, how do you decide what to buy?

Word processors, in common with all computer applications, have through the years developed into highly-sophisticated programs but to some extent that means potential users need to be even better-informed than previously about the range of features they should expect in a package and have a clear idea of which of them they need before they buy. It means coming to terms with some new jargon and then deciding which aspects of word processing are highest on your list of priorities.

A few years ago the concept of WYSIWYG was new. Nowadays most word processors follow the principle more or less but its name can still cause confusion. The letters stand for "What You See Is What You Get" and the idea is that your document is printed-out exactly as it appears on the screen. That gives you every opportunity to deal with aspects of the layout of your finished work before you operate the printer, so saving paper, time and effort.

The alternative to WYSIWYG is to achieve layout and text effects through commands embedded in the text which affect how the printer deals with the output but which have no effect on the screen display. In that rather old-fashioned way if you wanted to centre a line you would type a code at the start of the line you wanted to centre but the line would still appear at the left-hand side of the screen.

Most word processors fall rather short of the ideal. Many cannot show you where you have used different typefaces or text effects, such as bold or italics, although others indicate where they occur by using colour or highlighting on the screen.

As well as using different typestyles you may want to work with special symbols. If you want to type mathematical or scientific formulae you may want to use special characters and subscripts and superscripts. Your printer may well support a wide range of characters, such as letters of the Greek alphabet, and be able to cope with half-line spacing to allow for subscripts and superscripts.

Your word processor will need to issue special instructions to output those characters to the printer but how they appear on the screen is a different matter. Of more general importance, if you are working on a long document you need to know where page breaks occur – where one page ends and the next begins. Many word processors indicate that usually by a line across the screen but some do not. So when you are told a word processor is WYSIWYG, ask the following questions:

- **How does it show emphasised characters?**
- **How does it show altered typeface?**
- **How does it indicate page breaks?**
- **How does it show special characters such as subscripts and superscripts?**

Word processors can do more than let you enter and print-out your text. One extra almost everybody would welcome is an in-built spelling checker. Many word processors will read your text and let you know if it cannot find a word you have typed in its dictionary. Spelling checkers vary widely in their range of features. Some mark unrecognised words and leave you to find an alternative which often means having to resort to an old-fashioned dictionary; others offer suggestions about the correct spelling and let you replace an incorrect word with a correct one by selecting it from a list.

Some read and process your text as you type it; others read only an entire document at a time; some perform the feat quickly – others so slowly that you are tempted never to use the facility. Some allow you to add words to the existing dictionary; others to create your own personal dictionary. Be warned that some have American dictionaries which contain many mis-spellings in the first place – words like flavor, color and center – so the ease of removing words is another factor to take into account.

If a word processor you are contemplating has a spelling checker, ask:

- **How fast can it check a whole page of text?**
- **Does it mark only incorrect words or does it suggest alternative spellings?**
- **Does it check words as you type them, a whole document at a time, or give you a choice of modes?**
- **How big is the dictionary supplied and is it English or American?**
- **How easy is it to add or delete words?**

One of the features offered by many word processors is mail-merge – printing-out copies of the same document with some parts of it customised according to information kept in a data file.

Some word processors allow you to maintain lists of names and addresses, others to read in names and addresses from external database packages; some allow you to do both. There are advantages to both approaches; it is often simpler to use data from within the word processor but if you are entering a good deal of information which you may want to use in other ways than just in mailshots you may decide it is better to enter the records into a database program to use all its facilities in the future. Some word processors allow you to enter and use more information than names and addresses and some give you some of the sorting and extracting features of a database program. So the questions to ask include:

- **How easily can you combine information from a data file with a standard document?**
- **What information can you store in the word processor?**
- **Can you sort the data, create sub-lists of records and so on?**
- **Can you import data from other software?**

Mail-merge is not the only situation in which you might want easy ways of making a link with other software packages or of doing some other application in a word processor. There are circumstances in which you might want to include calculations in your documents. The need is often catered for by the inclusion of a simple calculator in the word processor; others make it easy to import information from spreadsheet programs and others offer full spreadsheet facilities in the same program.

Questions to ask are:

- **Does the package offer other applications?**
- **How easily can you make links with external applications?**
- **Is there an on-line calculator?**

In the future it is almost certain that DTP packages and word processing programs will merge into a single type of applications package but this will happen only as the hardware we use to run our programs becomes faster and more powerful.

# ching

**THE PLETHORA OF WORD PROCESSING PACKAGES MAKES CHOOSING THIS ESSENTIAL PIECE OF SOFTWARE A DIFFICULT TASK. SUE GEE OFFERS A FEW POINTERS.**

At the moment DTP on most personal computers is too slow. To discover how a package can cope with graphics and with aspects of layout ask:

- **Can you include graphics in a document and, if so, can you put it anywhere you choose and have text all around it?**
- **Can you put your text into multiple columns?**
- **Can you mix fonts?**

Before you buy a sophisticated word processor you need to ask how it will fit with your existing equipment. There are two aspects to consider, your printer and your computer. Both will limit what you can achieve and the ease with which you can do it.

You cannot make a silk purse out of a sow's ear nor can you have perfectly-printed text from an ancient 9-pin dot matrix printer. Equally, you cannot achieve fancy results from a daisywheel printer unless you make many daisywheel changes. There is, however, a new generation of printers which is relatively inexpensive and which enable you take advantage of the features of sophisticated word procesors.

If you have already brought a printer you need to take it into account when you choose your word processing package but if you do not already have one you are faced with another wide choice.

If you are about to buy a printer for word processing you need to decide what features are important to you. Previously most people assumed that daisywheel printers were essential for serious business purposes. These days the opposite is likely to be true. A daisywheel is far too inflexible; it cannot produce diagrams or graphs. First make a list of the tasks you will want your printer to do and then look for models which can cope.

If you want alternative fonts look for a printer which has them available, either as an in-built ROM or as plug-in ROM cartridges. If you intend to do mass mailings or long documents using single sheet paper, make sure you can buy a sheet feeder for the printer at reasonable additional cost. Although most dot matrix printers now have fast speeds in draft quality, some are very slow at printing in near letter quality but others can equal the speed of a laser printer. Ask:

- **What is its speed in characters per second for each mode?**
- **Which character set is standard? Does it have alternative character sets and, if so, how easy is it to switch between them?**
- **Does the printer support alternative fonts?**
- **Can you obtain a sheet feeder?**

Your choice of computer will also limit your choice of word processor. There are dozens of packages available for the PC and PC-compatibles but only a few for the Spectrum. The most sophisticated packages require plenty of memory and although they may claim to run on a floppy disc system become workable only if you have a hard disc. It is far too much like hard work to take advantage of extras like spelling correction if you have to keep swapping discs. As the most expensive word processing packages cost more than the most inexpensive computers it is well worth considering your software needs first and then building your hardware system round them.

In summary, the important points to consider when you set out to buy a new word processing package are:

- **How much do you expect it to do?**
- **Is it sufficient for it to let you enter and manipulate text or do you want it to support any or all of:**
- **Spelling correction?**
- **Mail-merge?**
- **Sophisticated type effects and special layouts?**
- **To cope with calculations?**
- **To integrate graphics and text?**

If you want your program to do all those things, expect to pay £300 or more and be prepared to invest some time getting to know how to use it. The more it offers, the more you will have to learn.

## NEWWORD 2

This is a low-cost WordStar 3-compatible program, available from NewStar for a range of machines. Its advantage over the cut-down WordStar products is that it is a full implementation of WordStar 3 and its advantage over the product on which it is based and its subsequent versions is its cut-down price.

Available for MS-DOS and CP/M machines, i.e., PCs, Amstrad PCW and CPC.

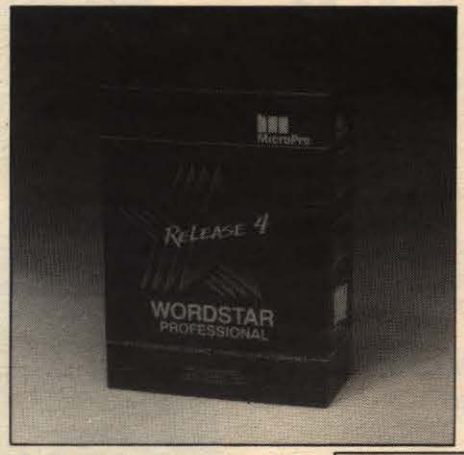
## MULTIWRITER

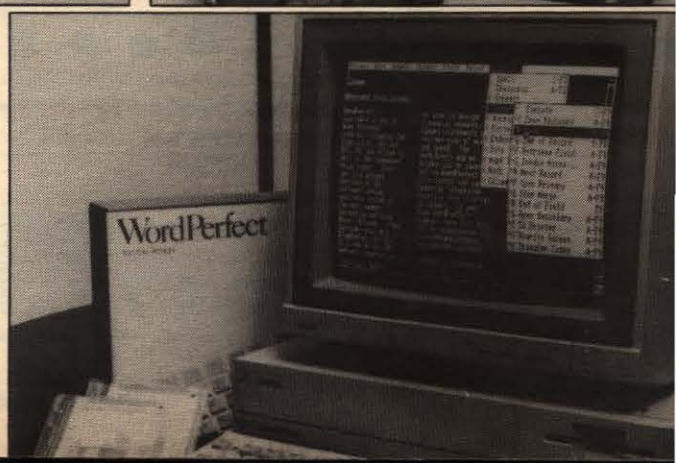
This program, againfrom NewStar, is another low-cost challenge to WordStar, in this instance to Wordstar 4. It can be used via pull-down menus or you can use the capitalised letter in a selection name. It has been designed to be used with a mouse but you can also step through menus with the cursor keys.

Available for MS-DOS machines, i.e., PCs and compatibles.

## WORDSTAR

Some years ago MicroPro *Wordstar* was synonymous with word processing. It was the most widely-available program and you either liked it or lumped it. Today things are very different; the choice is no






● **Clockwise from above left: WordStar Professional Release 4, Words and Figures, Wordperfect Amiga.**

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longer limited to WordStar and choice of WordStar products is wide. The hallmark of original WordStar was that it used multiple keystrokes to issue commands; you had to press the control key simulataneously with up to three letters.

These days the control key is not so overworked but in *WordStar Professional* Release 4 you still press it at the start of most command sequences. Nowadays the program also relies on function keys but WordStar Professional will appear familiar to long-time WordStar users, if somewhat more user-friendly.

WordStar now also appears in versions which are menu-driven. *WordStar 1512* and *WordStar Express,* both Amstrad PC-specific, are cut-down versions of the program. Commands are accessed mainly from menu but they also use the WordStar dot commands to control aspects of layout such as whether or not page numbers are displayed and whether or not the text is justified.

WordStar 1512 is slow compared to most other PC packages and, despite its name, Express is scarcely faster, though it tries to convince you it is by displaying its menus faster. The extra in Express is Boost, a pop-up accessory which gives you options including a calculator and an address book which allows you to paste information into a document. The two programs handle mail-merge particularly well but do not facilitate easy data exchange with other applications programs.

If you are looking for a WordStar which you can use via menus and which has all the latest features – multiple text screens, integration of graphics and spreadsheets, desk-top publishing facilities, on-screen thesaurus and more besides – look at WordStar 2000. This product, however, will not be recognisable to users of the original product from which it is a complete departure.

Available for MS-DOS and CP/M machines, i.e., PCs, Amstrad PCW and CPC.

## WORD AND WORD JUNIOR

*Word* from Microsoft runs under MS-DOS. It is menu-driven using nested menus and can be used with a mouse. It takes WYSIWYG to extremes and is able to display special effects on the screen. It is an expensive product but has many features to make you feel it is good value. They include the ability to do indices, footnotes and tables of contents, all very useful extras for writers of reports or textbooks. Other advanced facilities include formatting text in columns, editing documents in up to eight windows and an undo command to allow you to change your mind. It has mail-merge and spelling correction and is complete with disc-based tutorials and weighty manuals.

*Word Junior* has most of the features of its parent but has a single volume manual, no tutorial discs and a small price. Perhaps the most important feature it lacks is the spelling checker. Its discs are copy-protected and can be installed only once but at £69.99 who can expect more?

Available for MS-DOS machines, i.e., PCs and compatibles.

## 1st WORD PLUS

The important feature of 1st *Word Plus* is that it runs under the GEM operating system. Developed originally by GST, it was adopted by Digital Research to replace its product *GEM Write.* Its strength is in its ability to combine text and graphics. The latest version can work with both .IMG and .GEM files. It also makes extensive use of the mouse even to the extent that you can type-in text without touching the keyboard.

Available on the Atari ST and on PCs.

## WORDS AND FIGURES

If you need the ability to work with text ad spreadsheets at the same time, preparing financial statements or reports which rely on number-crunching, this is an inexpensive option. Its word processing facilities are fairly basic – there is no mail-merge, spelling checker or word counter – and there seems to be no way to justify a whole block of text. You also need to ensure that you configure the program for your printer; if you stick with the default settings printing is slow and cumbersome as it assumes you have a draft printer.

Available for the PC and compatibles.

## MULTIMATE

This is a full-function word processor which allows you to integrate spreadsheet and database applications. It offers DTP features such as multi-column layout and line and box drawing, has mai-lmerge and a thesaurus. Although relatively expensive, it represents good value if your main application is word processing and you also need a database and have a limited requirement for a spreadsheet.

Available for the PC and compatibles.

## WORD PERFECT

Expensive and sophisticated; not only does it have an in-built spelling checker but also a thesaurus. The problem with so many features is that it takes a long time to learn how to use them all ; even the help file is enormous.

Available on the Commodore Amiga, the Atari ST and on PCs.

## TASWORD

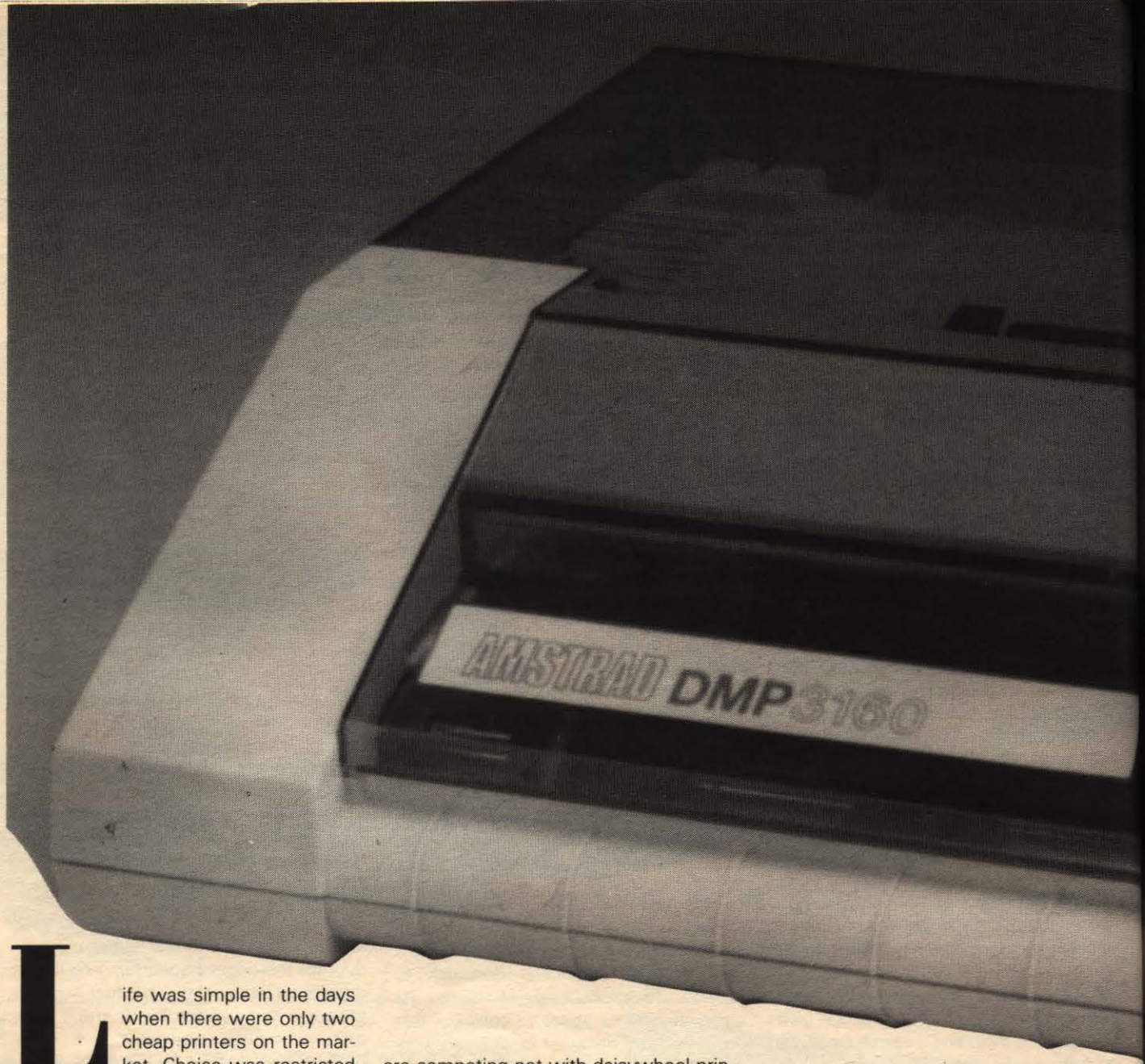
*Tasword* is a low-cost program available for a wide range of operating systems and machines. I first met it as a product for the original Spectrum and it has developed into a mature product, – along the same no-frills lines. It was and is easy to use, though nowadays the main options are accessed by function keys. It has about 100 commands but none requires more than two keys to be pressed. It has all the facilities needed to enter and correct text and to do mail-merge. A spelling checker is available as an extra for the larger machines.

Available for every type of Spectrum, Commodore 64, Tatung Einstein, Amstrad CPC and PCW and PCs.

## MINI OFFICE 2 AND MINI OFFICE PROFESSIONAL

Depending on which machine you are running it, this is either a set of five applications with links between modules or a fairly well-integrated package. The component parts are spreadsheet, graphics, database, comms and word processor. Like most multi-application packages the word processor is not its strongest element – no spelling check facilities are included – but with the links to its database it can handle mail merge.

Available for the BBC, Commodore 64, Atari, Amstrad CPC and PCW and PCs.




Life was simple in the days when there were only two cheap printers on the market. Choice was restricted but at least it was straightforward. If you could not afford more than, say, £200 you could buy a dot matrix model with poorly-defined print but if you required high-quality print you had to pay at least three times as much for a daisywheel. The Sinclair ZX-81 even had its own cheap spark erosion printer which used silver-coated paper; it was adequate for listing programs and I have received many letters written using them.

Then followed the era of the FX-80 – more than a dot matrix printer, a defined standard which could be copied and refined. That led to competition and price reductions in the dot matrix world but some of the 9-pin printers which implemented the standard still left much to be desired in terms of print quality, so daisywheel printers were still considered to be superior but were still more expensive.

Nowadays the picture is very different; there are still low-cost dot matrix printers but now they can produce high-quality output. There are also low-cost daisywheel printers. At the other end of the price range, high-cost dot matrix printers are competing not with daisywheel printers but with ink-jet and laser printers.

So what does your money buy? In general, it is businesses which will be contemplating spending £1,000 or more on a printer. You can buy a laser printer for around that sum or less but many models cost upwards of £2,000. Probably the most obvious advantage of a laser printer is speed; eight A4 pages per minute is a typically-quoted statistic. Laser printers take longer on average than that for short documents but once they start a long job, such as printing-out personalised letters to hundreds of customers, they achieve the rates claimed for them.

Of equal importance is the ability of the laser printer to mix text and graphics and to cope with different fonts and typestyles. A laser printer is a virtual necessity if your applications include desk-top publishing or even if you want to produce high-quality diagrams and graphs using programs like *GEM Draw* or *VP-Graphics*.

Another advantage of laser printers is that they are quiet; there is just a gentle whirring noise. Disadvantages are that they require regular maintenance, like a photocopier, and that the toner they consume is more expensive than printer ribbons.

The Hewlett-Packard LaserJet – £2,600 approximately – is a standard among laser printers but many other manufacturers offer models which can emulate that standard. The NEC Silentwriter range – prices from £2,000 – gives you essentially the same features and is relatively compact as its paper feed mechanism is mounted on top of the unit. Until recently the Canon LPB-8 II – £2,000 – was one of the cheapest and most popular models.

You can spend more than £1,000 on highly-specialised dot matrix or daisywheel printers. In general, it is the wide carriage models which cost most. In the case of dot matrix printers, paying more often means higher character definition. In the case of daisywheel printers it is increased speed which contributes to higher cost.

In the price band £300 to £1,000 the

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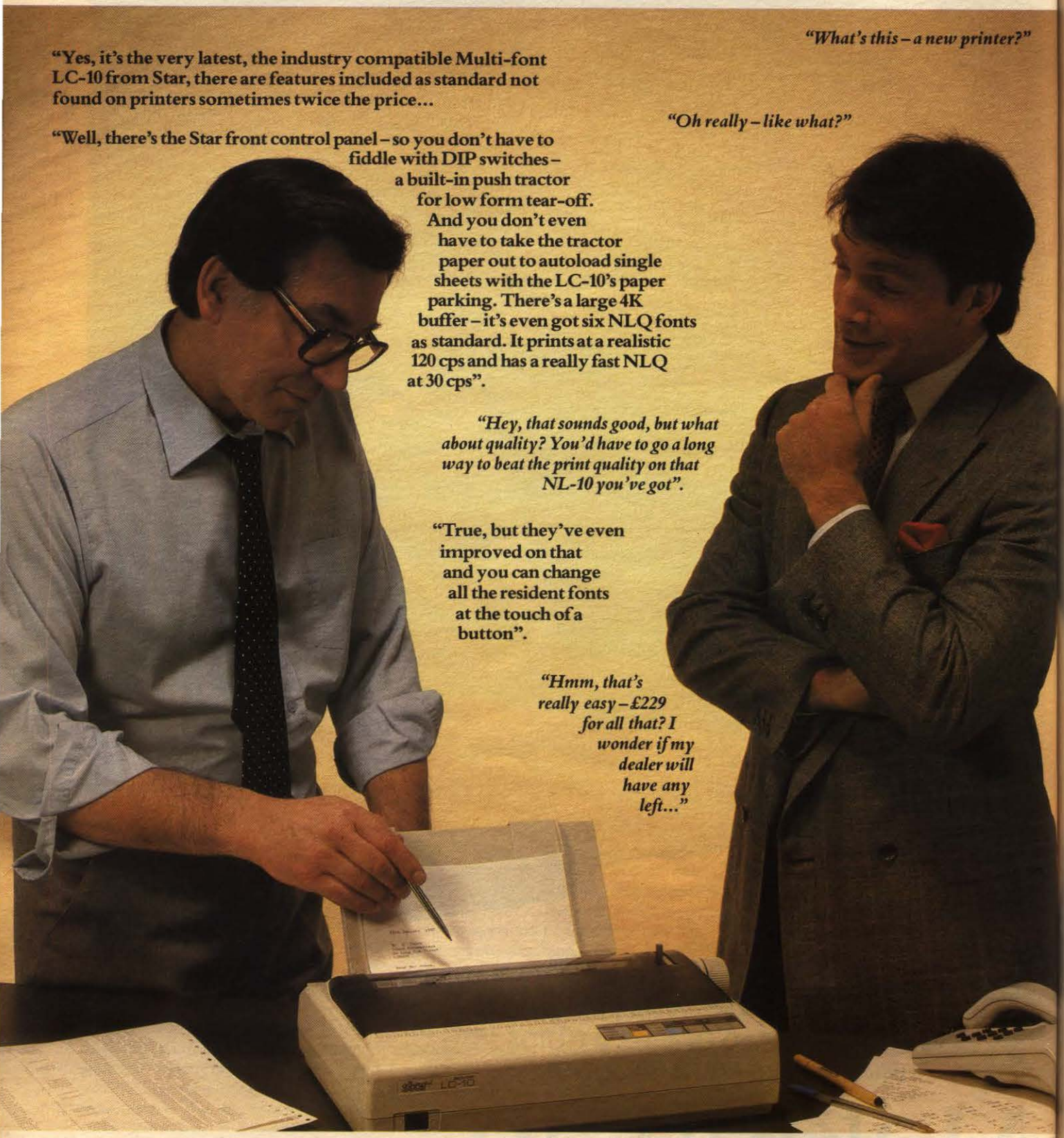


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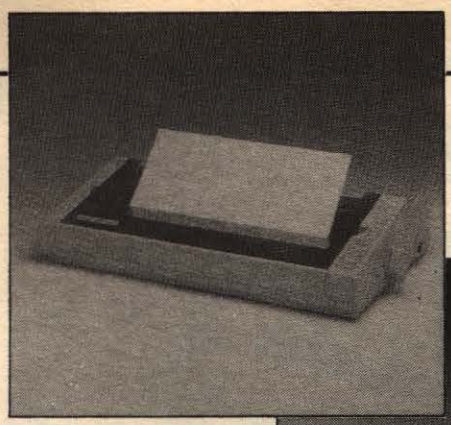

● **Above right: Amstrad DMP4000. Below: Star LC-10, available as a colour or mono model.**

choice of printers is enormous, not only between the printing technologies on offer but within competing models of the same type. You can now buy a laser printer in this price bracket. The Centronics Laser PP8 is available for £895, although you need to add an extra memory board – £125 – before it can offer HP LaserJet Plus emulation mode. For the base price it offers Diablo 630, Epson FX-80 and IBM graphics emulations. This means that it can behave as a fast and silent letter quality or graphics printer.

## VIRTUALLY SILENT

Although ink-jet printers are also relatively expensive – you can spend more than £1,300 on the Epson SQ2500, a high-speed, wide-carriage model – they, too, offer advantages in a business situation. In particular, they are virtually silent and have high resolution for both text and graphics; their resolution in dots per inch can exceed that of most laser printers.

The Canon BJ-130 – £795 – which uses bubble jet technology offers 360dpi compared to the 300dpi typical of laser printers. Diconix offers a portable ink-jet printer at £399 and a standard model at £599. Early ink-jet printers had many problems; the ink tended to smear and they required parchment-like paper. The latest models have overcome most of the difficulties but check the types of paper which can be used if you are contemplating buying.

Daisywheel printers used to be synonymous with letter quality text. If printing text and numbers is your sole requirement for a printer there is plenty of choice in this price bracket. Qume, Juki, Brother, NEC are some of the many manufacturers in the field. The reason people choose daisywheel printers is for typewriter-like quality. Their great disadvantage is that they can work only with their predetermined sets of characters. Although you can usually buy replacement daisywheels to give you more than one set of characters, they cannot be made to print graphics or any user-defined characters you might want to use.

The new generation of 24-pin printers is generally more expensive than 9- and 18-pin models and I would still urge caution with respect to these machines. Their attraction is higher resolution but the disadvantage is the lack of a recognised standard. That means you can usually use more pins only when printing graphics as the printers are still almost invariably treated as if they were older, cheaper FX-80s.

If you buy a dot matrix printer in this price bracket you should expect something more than basic performance. The Canon A60 at £499 and its wide carriage counterpart the Canon A65 – £548 – has three modes – draft, which is fast at 200cps; near letter quality which is still fast at 100cps; and an even better quality called WPQ which is slow – 34cps. There is a range of plug-in font cartridges for both models and the A60 has a reasonably-priced sheet bin feeder – £95 – as an optional extra. Given its speed in NLQ mode this makes it almost as fast at printing a large mailshot on to headed stationery as a laser printer.

Wide-carriage dot matrix printers tend to be more expensive than standard 80-column models of a similar specification. So the Micro Peripherals MP 201+ at £369, only £50 more expensive than the MP200+, represents good value and both printers offer fast performance – 240cps draft and 40cps NLQ.

The Star NX15 – £389 – is an alternative wide-carriage model and has a sheet

## ROBUST MODEL

feeder as an optional extra but is slower – 150cps in draft and 30cps in NLQ. Its 80-column counterpart, the ND10, costs £349 and prints 180cps in draft and 45cps in NLQ.

If speed is important, do not be misled by the statistics quoted. The Canon PW1080A – £349 – is a well-established model which is relatively fast at 160cps in draft mode but just as slow as, or even slower than, many cheaper models in NLQ where it achieves 27cps.

If you have less than £300 to spend on a printer there is still plenty of choice and many extras available. One impressive margain is the colour version of the Star LC-10 – £259 – which is a four-colour printer. Using plenty of colour becomes possible only if the programs you are running have an appropriate printer driver but by using embedded codes you can probably include colour in the output of a word processor. The non-colour version of the same printer costs £229.

The Amstrad DMP 3160 – £199 – is a model with a novel paper-handling system which makes it easy to load with single sheets and tidy in use with continuous stationery. It is a reasonably fast printer, 160cps in draft and 40cps in NLQ. Its stablemate, the DMP4000 – £229 – is a conventionally-designed wide-carriage model with slightly faster performance.

The Micro Peripherals MP135 – £149 – is a dot matrix model which offers all the standard facilities and can be recommended as good value. If you want a low-cost daisywheel printer, consider the MP26 – £259 – from the same supplier which prints at 26cps.

All the prices quoted in this review have been the recommended retail prices but most printers can be found for less – in many cases much less – but remember that you will have to pay VAT on top of whatever nett price you negotiate. A printer I often recommend as having good output and being a robust model is the Panasonic KX-P1081 but make sure you get a better price than its list price of £245.

Another good buy, so long as you find it at an advantageous price,is the Citizen LSP 100. When you decide which printer to buy, do not be afraid to try to get a good deal from your retailer. Remember that most printers do not have a cable, so at least try to get that included in the price.

# THE ONLY

# WITH

THE NEW

The new Citizen LSP-100 may bear more than a passing resemblance to the Epson LX800. But two crucial differences set these 9-pin dot matrix printers apart.

Firstly, there is the LSP-100's unrivalled versatility. The built-in font produces over 400 different print styles, including reverse printing, proportional spacing, double height, double width, double strike and italic. While working in Epson mode it will accommodate an amazing 239 downloadable characters and 93 in IBM mode.

Secondly, the LSP-100 is very competitively priced and has a unique two year warranty.

It is the only one to choose.

For more information call Citizen, free of charge, on 0800 282692.

## LSP-100

| | LSP-100 | LX 800 |
|---|---|---|
| **Speed** | | |
| NLQ mode | 30 cps | 25 cps |
| Draft Pica (10cpi) | 150 cps | 150 cps |
| Draft Elite (12cpi) | 175 cps | 180 cps |
| Buffer | 4k | 3k |
| **Downloadable Characters** | 239 Epson mode 93 IBM mode | 6 |
| **Built-in fonts** | 1 | 2 (NLQ only) |
| **Paper Feed** | | |
| Standard tractor feed | Yes | Yes |
| Bottom feed | Yes | No |
| **Warranty** | 2 years | 1 year |
| **Price** | £249 | £275 |

CITIZEN
COMPUTER PRINTERS

# Computers by Post

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Epson LX800 £175

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| DMP4000 | £260 |
| LQ5000DI | £364 |
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| 1509 | £358 |
| 1709 | £429 |
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| 2024 | £574 |
| 4018 | £1099 |
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| MSP-10 | £198 |
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| | |
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| | |
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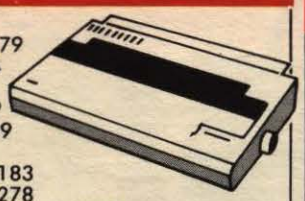
| KXP1540 | £468 |



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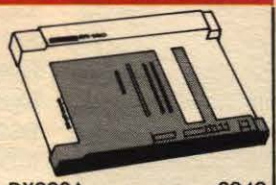

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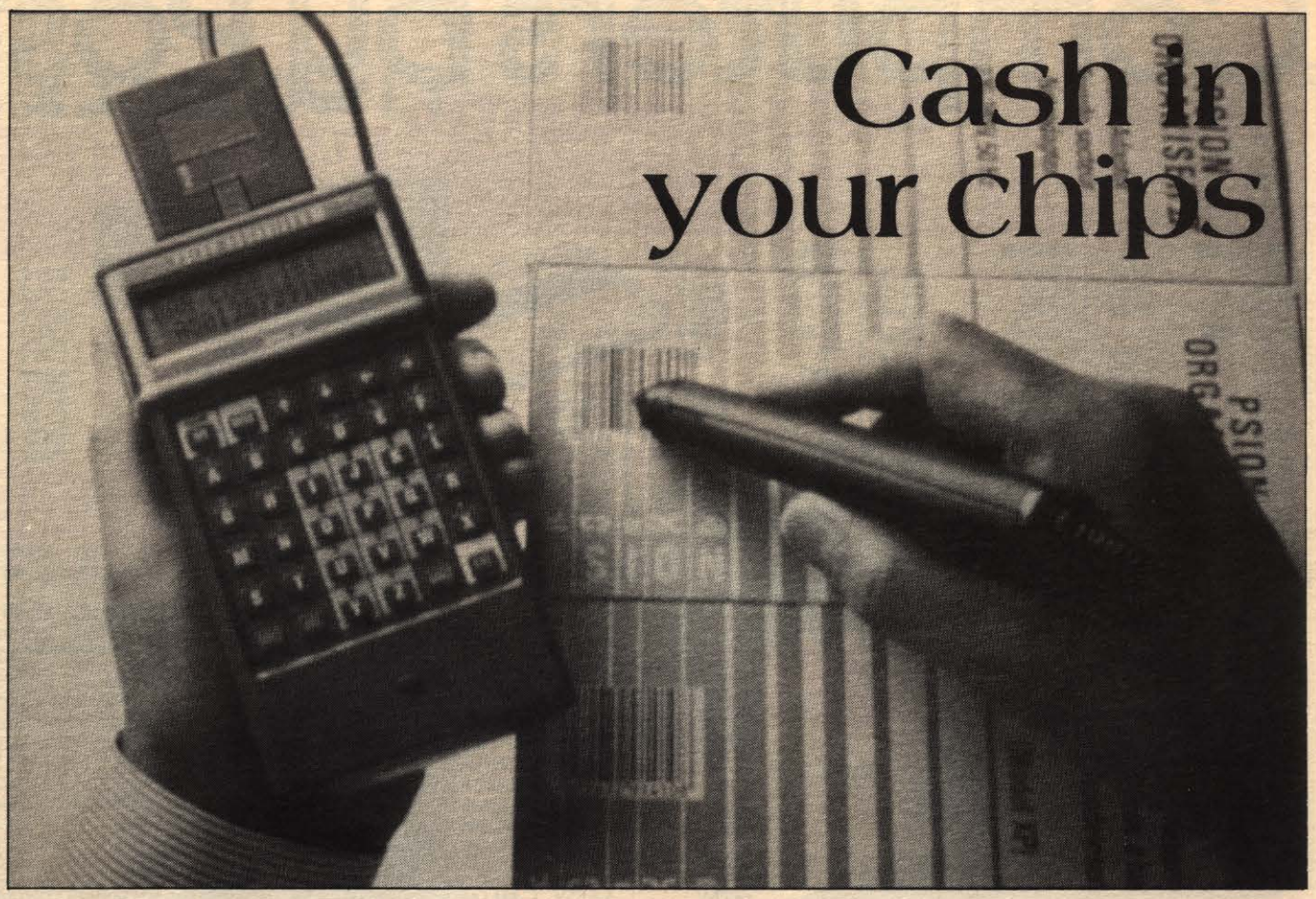

# Cash in your chips

**JOHN DAWSON EXPLAINS HOW TO CALCULATE BUSINESS EXPENSES WITH A SIMPLE PROGRAM ROUTINE FOR THE PSION ORGANISER.**

The Psion Organiser is a small hand-held computer you can put into a coat pocket. The keyboard is difficult to use and the display shows only two lines of 16 characters. Who would buy a machine like that when 16 colours and 500,000 characters of memory seem like a minimum requirement? Well, Psion is doubling its production capacity and says that it expects to sell more than 250,000 machines in 1988.

Do not be deterred by the limited human input/output facilities; this is a clever and powerful machine. The Organiser can hold 256K of information in two data packs which plug into the back of the machine. That may not sound much but it is the equivalent of 40,000 words of English text, about the length of an ordinary novel. The information is permanent in the sense that it is stored on EPROMs which can be programmed as you type information into the machine. That is a clever idea and exceptional to the Organiser.

## COMMUNICATIONS ABILITY

In addition to being able to blow information into permanent storage, the Organiser has a port which can be connected to an RS232 interface, the comms link peripheral. The comms link connects the Organiser to a printer, a modem, another computer – a BBC micro or an IBM compatible or any other device which has an RS232 or RS423 port and some communications ability.

It is an important accessory for the basic Organiser. It means that you can use another machine to write and edit information and programs for use in the Organiser. The word processor you use as routine can be used to prepare information for transfer to the Organiser with all the usual word processing facilities – full screen editing, search and replace, and cut and move blocks of data or program instructions. It is also easier to understand the flow and structure of a program when you can see 24 lines at once rather than only two.

The programming language built into the Organiser is well-suited to handling and manipulating simple data files and business information. It can be used to establish and maintain card index databases but would be much less suitable for transactional or relational databases. There is no provision for random access files.

In practice, however, this is really not problem for many purposes where the value of small size and instant access to information far outweighs any limitation in the scope of the programming language. There are single commands to move through a file – FIRST, LAST, NEXT,

BACK – and to find a string of characters anywhere in a record – FIND. Records can be edited and updated – UPDATE – even on the EPROM packs; the information is moved into RAM, modified by the user, appended to the end of the file as a new record while a delete flag is blown on the old record.

XPNS is the main procedure in the program. A file named A:XS is either created or opened in the Organiser RAM. The purpose of the procedure is to prompt you for the type of expense and then complete an entry in the file with the minimum of keystrokes. The main menu in XPNS: and the two lines including "Expenses dump" – "Page" in XDUMP: should be entered as one line and not split as shown in the listing. With these exceptions, the program works exactly as listed.

## TIME AND MONEY

If your company uses a different set of claim items you should have little difficulty in altering the details in the ELSEIF statements following hte menu. Each of the headings in the menu relates to a statement in the subsequent list. A$ is displayed on-screen while you enter more data. B$ is the information stored in the expenses file (ID$) together with an automatic date/time stamp (DT$).

The amount of money is stored next (SM) followed by the initials of the person who made the payment (JD$). Where A$ includes a question mark this is identified later in the program – IF LOC(A$,"?") – and XPNS: prompts for additional information.

XSEARCH allows you to search your expenses file for named items. If you choose not to enter an item the procedure will display all the expense claims in the file. XDUMP: produces a paged output of the expenses file on a serial printer. There is no TAB function in the Organiser programming languge but it is not difficult to overcome the problem with the statement A.ID$+REPT$(" ",45-LEN(A.ID$)) which adds spaces after a string up to the 45th character.

The program, which is set out in the listing has saved me considerable time and money.

Everyone has different ways of working but it is easier for me to take the machine I use already as a portable diary with alarms and a store of business telephone contacts to enter a taxi ride or a restaurant bill than it is to make a painstaking note on a piece of paper.

Keep in mind also that the information is stored ready for further analysis and processing. The present program does not amalgamate data in the same category each day to present a finished expense claim form but the potential is there.

```
List 1:        Business expenses program for the PSION Organiser

               Three procedures -    XPNS:   XSEARCH:   XDUMP:

XPNS:
LOCAL M%,N%,A$(20),B$(40),C$(100),D$(2)
A::
IF EXIST("A:XS")
  OPEN "A:XS",A,DT$,ID$,SM,JD$
  ELSE
  CREATE "A:XS",A,DT$,ID$,SM,JD$
  ENDIF
DO
M%=MENU("Taxi,Phone,Rail,Hotel,Food,Entz,Car,Air,Other,Miles,Xchange,-
Note,Search,List,Wipe-out")
IF M%=0 : BREAK
  ELSEIF M%=1  : A$="Taxi to ? " : B$="Taxi - "
  ELSEIF M%=2  : A$="Phone" : B$=A$
  ELSEIF M%=3  : A$="Public transport" : B$=A$
  ELSEIF M%=4  : A$="Name of hotel ?" : B$="Hotel - "
  ELSEIF M%=5  : A$="Food/drink" : B$=A$
  ELSEIF M%=6  : A$="Who and where ? " : B$="Entertainment - "
  ELSEIF M%=7  : A$="Parking/repair" : B$="Car park or repair "
  ELSEIF M%=8  : A$="Airfare to ? " : B$="Airfare - "
  ELSEIF M%=9  : A$="What ? " : B$="Misc - "
  ELSEIF M%=10 : A$="Where to ? " : B$="Destination - "
  ELSEIF M%=12 : A$="*"
  ELSEIF M%=13 : XSEARCH: : GOTO B::
  ELSEIF M%=14 : XDUMP: : GOTO B::
  ELSEIF M%=15
  CLS
  PRINT "Expenses data   will be lost Y/N"
  BEEP 100,200
  KSTAT 1
  A$=GET$
  IF A$="Y"
    CLOSE
    DELETE "A:XS"
    GOTO A::
    ELSE
    CLS
    PRINT "OK Data safe"
    BEEP 100,200
    PAUSE(-30)
    GOTO B::
    ENDIF
  ELSEIF M%=11
  PRINT "New currency"
  PRINT "-] ";
  INPUT B$
  CLS
  PRINT "OK  Rate/1UK ?"
  PRINT "$] ";
  INPUT A.SM
    IF A.SM = 0
    GOTO B::
    ELSE
    M8=A.SM
    A.DT$=MID$(DATIM$,5,17)
    A.ID$="Currency is now "+B$
    A.JD$="/UK"
    APPEND
    GOTO B::
    ENDIF
  ENDIF
C$=""
  IF A$="*"
  CLS
  AT 1,1
  PRINT "Enter text";
  AT 1,2
  KSTAT 2
  INPUT C$
  KSTAT 1
  D$=UPPER$(LEFT$(C$,1))
  C$=D$+RIGHT$(C$,LEN(C$)-1)
  A.DT$=MID$(DATIM$,5,17)
  A.ID$="["+C$+"]"
  A.JD$=""
  A.SM=0
  APPEND
  GOTO B::
  ENDIF
PRINT A$
IF LOC(A$,"?")
  AT 1,2
  INPUT C$
  ENDIF
IF M%=10
  CLS
  PRINT "OK  Miles ?"
  AT 1,2
  PRINT "-] ";
  INPUT A.SM
  C$=C$+" ["+GEN$(A.SM,8)+" miles]"
  A.SM=A.SM*0.06
  A$=""
  ELSE
  CLS
  PRINT A$
  PAUSE(-15)
  CLS
  PRINT "How much ?"
  AT 1,2
  PRINT "$] ";
  INPUT A.SM
    IF A.SM=0
    CLS
    PRINT "Cancelled"
    BEEP 100,200
    PAUSE(-20)
    GOTO B::
    ENDIF
  CLS
  PRINT "OK  Who paid ?"
  A$="JD"
  EDIT A$
  ENDIF
A.DT$=MID$(DATIM$,5,17)
A.ID$=B$+C$
A.JD$=A$
APPEND
B::
UNTIL M%=0
CLOSE
RETURN
XDUMP:
LOCAL LINES%,M%,PAGE%,LD$(20),L$(90)
M%=MENU ("Laser,TEC,IBM")
IF M%=0 : RETURN
  ELSEIF M%=1 : LSET: (9600,0,8,1,1,1,0)
  ELSEIF M%=2 : LSET: (1200,0,7,1,1,1,0)
  ELSEIF M%=3 : LSET: (9600,0,8,1,5,0,2)
  ENDIF
FIRST : PAGE%=0
E::
LINES%=1 : PAGE% = PAGE%+1
LPRINT : LPRINT REPT$(" ",12);"Expenses
dump on ";DATIM$; REPT$("
",27);"Page ";PAGE%
LPRINT REPT$(" ",12);REPT$("_",75) :
LPRINT
DO
L$=""
AT 1,1 : PRINT PAGE%;" - ";LINES%
IF LEFT$(LD$,11) = LEFT$(A.DT$,11)
  L$ = REPT$(" ",11)+RIGHT$(A.DT$,6)+"  "
  ELSE
  L$ = A.DT$+"  "
  ENDIF
L$ = L$+A.ID$+REPT$(" ",45-LEN(A.ID$))
L$ = L$+FIX$(A.SM,2,-7)+"  "
L$=L$+A.JD$
LPRINT REPT$(" ",12);L$
LINES% = LINES%+1 : LD$=A.DT$
NEXT
IF EOF : GOTO F:: : ENDIF
UNTIL LINES% ] 55
LPRINT CHR$(12)
GOTO E::
F::
LPRINT CHR$(12)
LSET:
RETURN
XSEARCH:
LOCAL D%,F%,A$(25)
CLS
F%=0
PRINT "Search for ?";
AT 1,2
INPUT A$
FIRST
DO
IF LOC(A.ID$,A$)
  WHILE DISP(-1,"") [] 13
  ENDWH
  F%=1
  ENDIF
NEXT
UNTIL EOF
IF F%=1
  CLS
  PRINT "No more records"
  BEEP 100,200
  GET
  ELSE
  PRINT "No match found"
  BEEP 100,200
  GET
  ENDIF
RETURN
```

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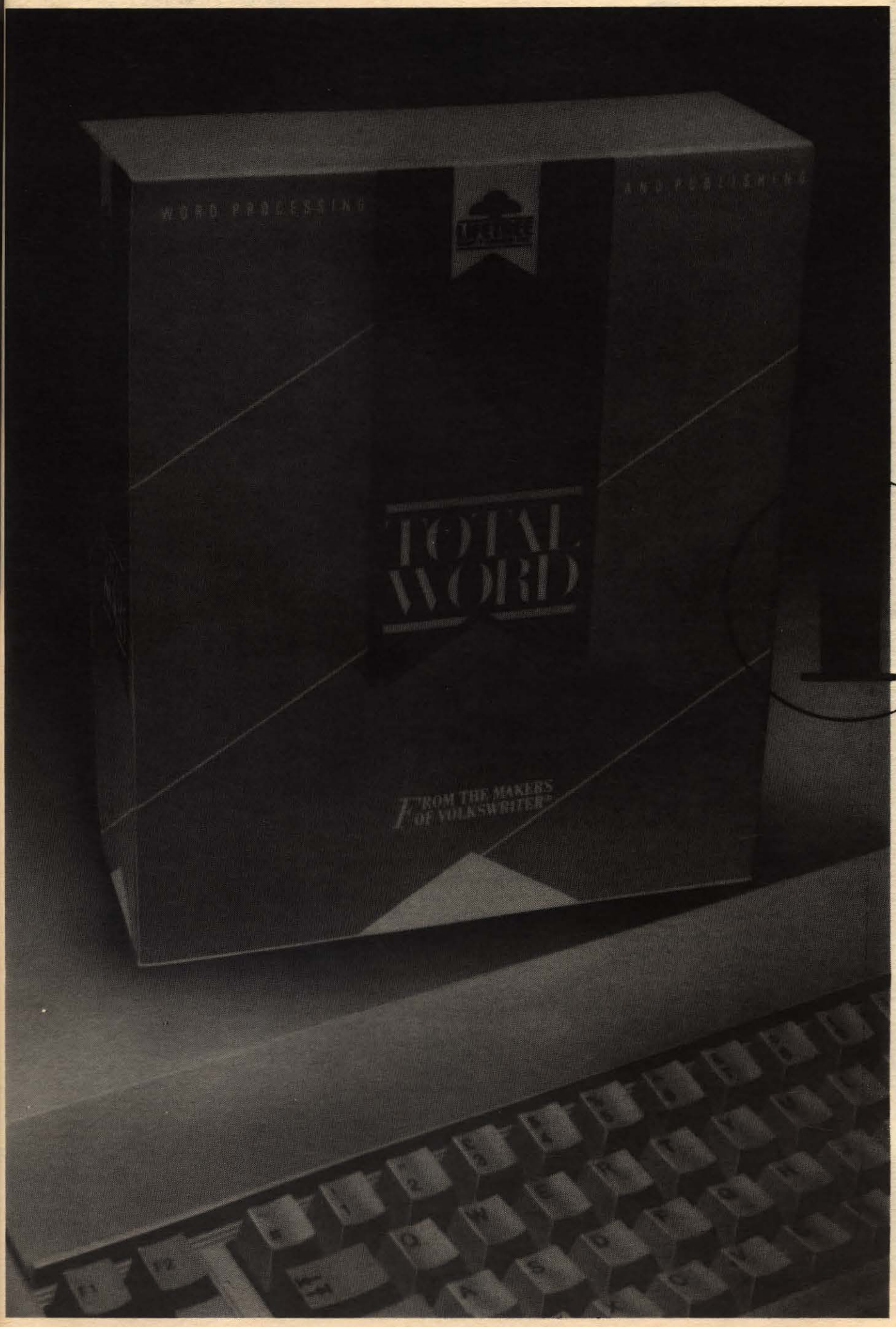
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# ADVENTURE PLAYGROUND

## GOING PUBLIC

**MIKE GERRARD VENTURES INTO THE PUBLIC DOMAIN AND IS PLEASANTLY SURPRISED BY THE AMOUNT AND GENERALLY HIGH STANDARD OF SOFTWARE AVAILABLE FOR THE ATARI ST.**

Venturing into the public domain, that area of software which offers a bewildering variety of programs at little more than the cost of a disc, I was looking at adventure programs and an adventure-writing utility for the Atari ST. Many adventure programs, being text-only, are available for other machines, too, so to give an idea of the type of games available, it is worth looking for your nearest public domain library if you have not yet done so.

My only previous dip into the public domain was for the Amstrad PCW a year or so ago, when the one adventure I found was the inevitable version of *Colossal Caves*. I also acquired a few games of the *Mastermind/Hangman* variety which did not exactly trick me and it was not long before I re-formatted the disc and bid them goodbye.

Therefore I was pleasantly surprised by the generally high standard of ST software. If you think ST software is expensive, how about five adventures for £2.50? That is one of the two best-buy discs at which I look, while for £1 you could buy a copy of an adventure-writing utility called ADVSYS, which would enable you to produce your own complex text-only adventures. There are also discs which include solutions to adventures like *The Pawn* and some of the Infocom range.

That £1 charge naturally does not include the cost of the disc – you have to provide your own disc plus a jiffy bag with return postage on it. Some public domain libraries will sell the disc with programs on it for about £2.50/£3.50 including postage and one will even sell you a back-up disc at the same time for £1.35. Before giving you details of some of the libraries, let me remind you that the public domain works only because people give their programs to it, so if you feel you have something to offer do so.

### SCOTTISH BIAS

It may just be a picture of which you are proud or a few tunes you have knocked out but offer to add them to the library. If you have written a lengthy program, or a full-length adventure game, you may care to try the American shareware way of working, by which you include your name and address in the program and ask users to send you whatever they think the program is worth to them.

The contents of the various ST libraries inevitably overlap to a large extent but is not always the case so it is worth contacting more than one. There are several but the ones I tried were Floppyshop ST, 50 Stewart Crescent, Northfield, Aberdeen AB2 5SR; Star U.K. Computer Systems Ltd, Cotton House, 491-493 Union Street, Aberdeen AB1 2DB; and McSoft, 9 Abingdon Gardens, Bath, Avon BA2 2UY.

If you detect a certain Scottish bias I assure you it is not deliberate but it does not do much for the Scottish reputation for meanness to discover that they are virtually giving away programs. All the libraries have very similar membership fees and arrangements – about £5 annual membership, which includes a newsletter, and £2.50/3.00 per disc.

There were a few D&D type adventures, like *Hack* and *Larn*, which use characters and symbols from the keyboard to provide you with a graphics map on-screen in which you can move around. They are scarcely *Bard's Tale* standard but you cannot complain that they are over-priced. The programs are complex, with the usual finding of gold, fighting monsters, trading weapons and so on. A quick visit at the start to the Larn Thrift Shoppe to equip yourself for the journey into the magical and treasure-filled Caves of Larn. A flail, a longsword, a ring of regeneration? All yours for the buying – no credit cards accepted. Not my type of game but, graphics apart, they seemed just as good as some I have seen published.

Still in role-playing D&D mood there is *Eamon*. This is a new – to the ST – adventure creator program from the U.S. but there is also a program of the same name which comprises several adventures written using the system, though not the facilities with which to write programs yourself, so if you are interested specifically in writing a role-playing adventure you had better check first. Steve Delaney of Floppyshop told me:

"I downloaded this one two weeks ago from the Village BBS but unfortunately some of the files were corrupt so I cannot offer it yet. It is written in GFA Basic and looks from what I have seen of it to be a superior product to ADVSYS, the other adventure-writing program. The sysop on the Village is investigating the problem and getting back to me about it, so as soon as I have a working copy I can offer it through the library."

Eamon should be available by the time you read this and from what I have seen of the five sample adventures on the McSoft disc reference GAM015 it looks good. It was written originally on the Apple II and has since been converted for the PC, Atari 800 and CBM64. More than 150 adventures have been written using it. It is in GFA Basic but you will need a GFA interpreter if you want to use it. There is even an Eamon Users' Club if you are serious about it and it will keep you informed of new adventures written using the system, as well as giving hints on getting the best from it.

The sample adventures give you an idea

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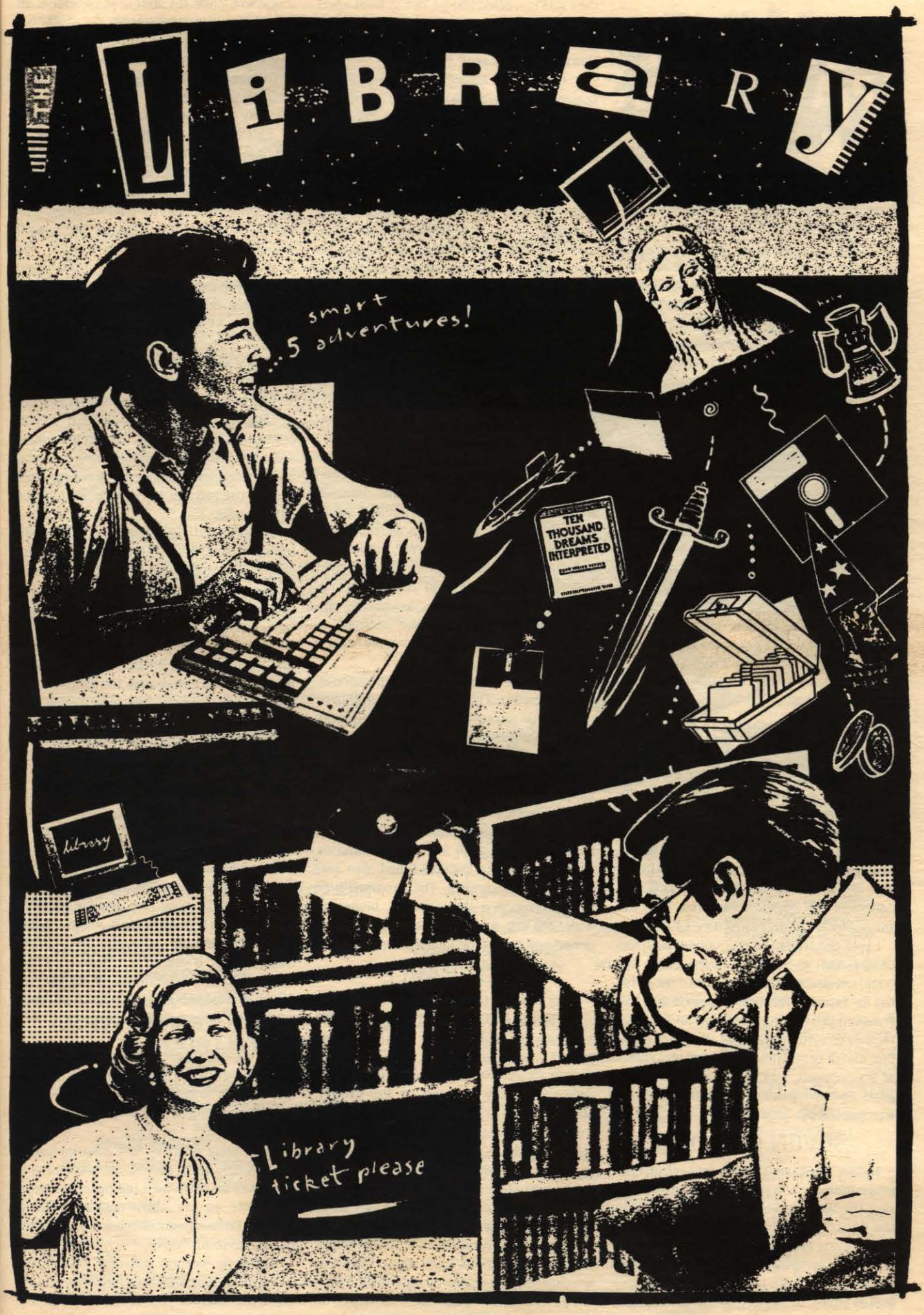

of its style, and stylish some of them are. As well as a beginners' adventure, which is a very distant cousin of Colossal Caves, there is *The Devil's Tomb, The Death Star, The Zyphur Riverventure* and my personal favourite, *Quest for the Holy Grail*. The last one is not the one which has been published in the U.K. for the Spectrum by that title but it is also based on the Monty Python film of the same name and gave me plenty of laughs. The instructions are in English and Swedish – about as Swedish as the language of the Swedish chef in *The Muppet Show*.

Your quest in the game? "You must find the Holy Grail or you shall never see the Master Diskette again" When you start you immediately meet the Black Knight, who continues to fight you even as his limbs are chopped off one by one – "It's just a flesh wound". Soon after I encountered some maidens and died of sexual excess.

All Eamon games begin in the same way with a visit to the outer chamber of the Hall of the Guild of Free Adventurers where "many men and women are guzzling beer and there is loud singing and laughter". On the north side of the chamber is a cubbyhole with a desk.

## BURLY IRISHMAN

Over the desk is a sign which says 'REGISTER HERE . . . OR ELSE!'" You then have the option of going to the desk or joining the boozing and I advise you to go to the desk where you will be greeted by a burly Irishman who scowls and asks your name. He even gets stroppy with you if you fail to type it with a capital letter and this was typical of the humorous approach to the game which I really enjoyed.

I told the Irishman my name was Dimli Gloing and he checked his register but could not find me there, so added me to his list for future reference – as soon as I had removed the write-protect tab on the disc. He was then replaced by a tall man of possibly Elvish descent who handed me a book of instructions, told me my attributes and gave me permission to commit suicide if I was not happy.

## SEVEN OPTIONS

In the Main Hall there is a choice of seven options. You can go on an adventure; visit the Weapon Shop; hire a wizard; find the banker, examine your abilities; go to the training ground or, last, leave the universe temporarily. Choosing to visit the wizard, eventually I found the old mage, Hokas Tokas, whom told me his fees for the four spells at his disposal. A Speed Spell cost 2941, a Blast Spell 1765, a Heal Spell 588 and a Power Spell 59. I counted my money – 200 gold coins. Oh, well "One Power Spell, please."

I could not afford any training but bought a few weapons at the shop and was then ready to enter an adventure, choosing from those on the disc; you can, of course, replace them with some of your own if you have the Eamon adventure writing system.

I have not yet seen that system but I have seen ADVSYS and can recommend it to anyone who wants to produce text adventures but with one or two provisos. First, a printer is essential unless you want to copy the 17 pages of instructions on the disc. A limited knowledge of programming would be helpful, too, as ADVSYS assumes a certain awareness in the user and does not adopt the friendly approach we have seen with *Quill, GAC* and *PAW*. If you think those programs were definitely not friendly, ADVSYS might present you with problems.

## PREPARE FILES

To use ADVSYS you need to prepare ASCII files of all the adventure descriptions and actions which are needed, using either a program editor or a word processor like *1st Word* in non-WP mode. You then need only the two programs provided on the disc, ADVCOM and ADVINT, to create your adventure. Any adventure you write can be sold and the authors of ADVSYS suggest doing so on a shareware basis.

The facilities of the system are impressive. It allows you to give objects weights or values; its parser will cope with inputs such as TAKE THE RED SWORD AND THE BLUE BOTTLE; GIVE THE TROLL THE RED SWORD; GIVE THE RED SWORD TO THE TROLL; TROLL, GIVE ME THE SWORD.

The overall program works on the basis of a logical series of what are called Handlers. You begin with an INITIAL handler, which introduces the game and also sets the relevant counters. The program then moves through a set sequence, beginning with UPDATE, which checks what has happened and prints the location description.

## FAVOURABLE

Then follows the PARSER handler followed by the BEFORE, AFTER and ERROR handlers, i.e., the input is read and interpreted, acted on, given the necessary responses and reactions, and anything not understood falls through to the ERROR handler which deals with that and prompts a different input.

The limits of the program compare favourably to the standards of many published adventures. It will understand up to 500 words, accept 500 objects and attribute up to 20 properties to each of those objects; e.g., is it a container, does it have weight, will it break, burn, float.? You can have up to 200 actions or functions, which is rather on the small side but there is room for about 16K of code, 16K of data and a massive 250K for your text, including all descriptions and responses.

ADVSYS is accompanied by a sample space adventure, *Starship Columbus*, which shows that a good deal can be done with the program.

Likely to cost somewhere in the region of £29.95 will be the forthcoming *ST Adventure Creator* from Incentive, though naturally for that price you will be able to include many more features in your adventure than these public domain programs allow – features like graphics and sound. Incentive has already published *The Graphics Adventure Creator* for the Spectrum and Amstrad CPC series, so I asked managing director Ian Andrew if STAC would just be GAC with knobs on.

## ROYALTY PAYMENTS

"In a way it will be an extension of GAC, in that it will work in a similar menu-controlled manner, but the programmer, Sean Ellis, has not just converted it – he has written it from scratch to take advantage of the extra features you have on the ST", he said.

"In addition to the built-in graphics editor which GAC has STAC will also allow the user to import graphics drawn on *Degas* or *Neochrome* and store them in a compressed format to maximise memory. The built-in editor is reasonably powerful. As well as the usual features like airbrush, line drawing, fast filling, various shapes and so on, you can re-size the graphic window to suit yourself and also merge pictures. It supports 16 colours, 16 line styles and 32 brush styles. There will also be a simple animation technique possible.

## PLAY-TESTING

"On the sound side you will be able to include music when printing-out messages, or have sound affects. You will be able to write multi-disc adventures if you wish. So far as size goes, we are hoping that STAC will be less than 100K so on a basic 520ST that should leave you about 300K free for data. If you have a Mega ST 4 this expands to about 3.8MB and if anyone can fill that amount of space with a good adventure we would be interested to see it."

The ST Adventure Creator certainly has me itching for a copy, though as yet the only people to have seen it are those who are play-testing it – if play-testing is the correct word.

Each copy of STAC will also include a free adventure to give users some idea of what can be done with the program and if you write an adventure with it naturally you will be free to publish it without royalty payments to Incentive.

If no commercial software houses are interested in publishing your adventure when it is finished you can always offer it to the public domain.

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**ATARI COMPUTERS**

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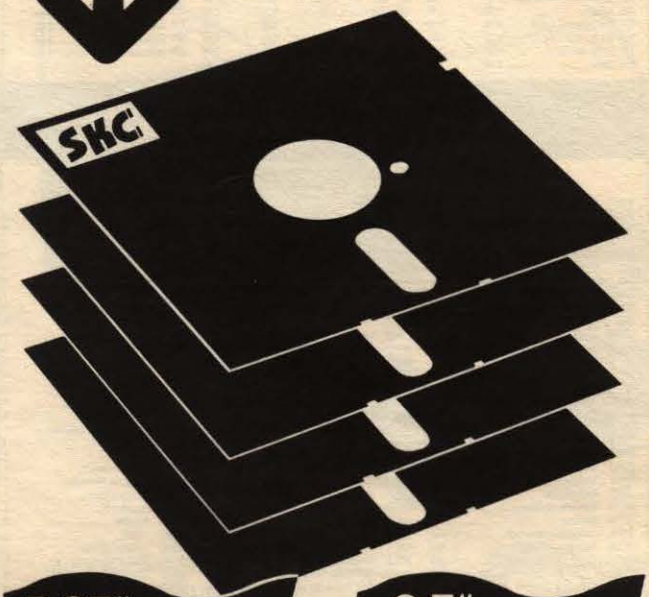


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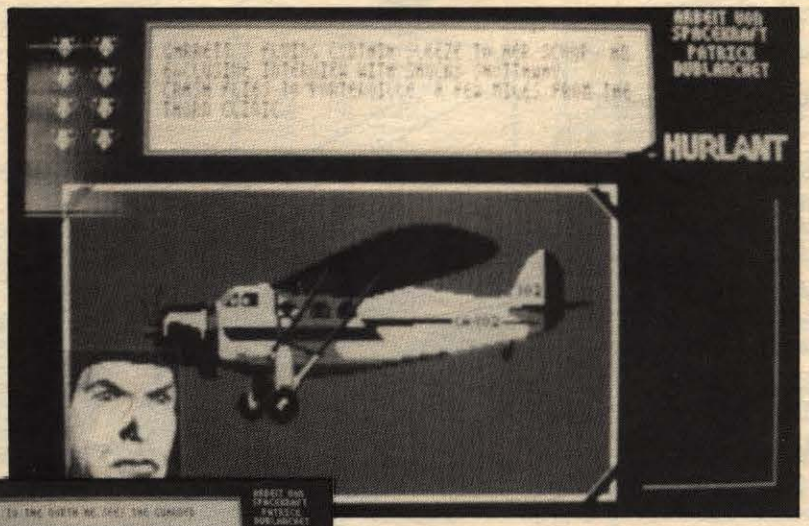


● Right and below; crash Garrett.

An adventure game with sampled music – surely not? Strange though this may seem, if I tell you that the program in question was written by French outfit Metal Hurlant and imported by Infogrames, the weirdness of the idea is at least understandable.

Infogrames has a reputation for the bizarre and it is true to say that you have never seen an adventure game like *Crash Garrett*. The story is set at the start of World War 2 and concerns one time hell-raiser Crash Garrett and Nazi plots and intrigue set in and around Tinsel Town.

After enjoying the jazz music, the audio delights continue as the plot unfolds. Flying high in the sky is one Crash Garrett, transporting his passenger and Hollywood gossip columnist Cynthia Sleaze to an interview with Hollywood's top psychiatrist Caleb Thorn.

While the main display shows a picture of Crash's very pretty aeroplane, and the engine hums away, vignettes of Crash and Cynthia are used to reveal that Lana the starlet, due to marry Caleb, has apparently topped herself the night before and Cynthia is going to dig up the dirt.

These small pictures are used to great effect all through the adventure and when the text describes certain activities they are choreographed accordingly.

As you do not control Crash you play a voice in his head which suggests ideas which he may or may not follow; there is a small wait before you have to type anything in. After landing at Thorn's place, Cynthia goes inside and you wait by your aircraft. A short time later a mechanic wielding a blunt instrument emerges and tells you to leave.

The obvious solution is always worth trying first in this game, so you tell Crash to hit the thug. A fist emerges from the centre of the screen and to the accompaniment of a whack noise sends the vignette of the mechanic flying. Progressing beyond this point is tricky, if only because of the limitations of the parser. When asked by the guards surrounding the house if it is the only place to go, to surrender you have to type 'accept' to avoid being filled with holes. That is scarcely a standard answer and makes the opening scenes more difficult than they should be. Thankfully the rest of the game is more tolerant.

Another peculiar feature soon comes into play – the power points. Crash can call on a limited number of power points to perform near superhuman feats like removing handcuffs at a vital time. Further into the game if you survive so long – saving at the start of every new situation is advisable – you will find Crash cuffed in his aeroplane with Cynthia at the controls. While having nothing against women drivers, or fliers, this is one time that the woman in the scene has to take the back seat if you are to avoid a spectacular demise.

Crash Garrett is an extremely stylish piece of software. While the parser and semi-linear nature of the action will not find favour with the purists, it is safe to say that it really is an adventure game for those who do not like adventures.

*Mark Ulyatt.*

# Card Sharks

**Price: £14.95**
**Machine: C64/128**
**Publisher: Accolade**

Card Games are one of the oldest forms of entertainment and are still immensely popular. Computer games have been produced in many forms to try to take advantage of this popularity but most have been very boring. The Accolade *Card Sharks* attempts to change all this.

Card Sharks allows play in one of three of the world's most popular games, Poker, Hearts and Blackjack. A comprehensive manual explains how to play each game and sets out the rules, with particular attention being paid to the different variations of Poker it is possible to play. All the

instructions are well-laid-out and easy to follow. Reading before playing and a few quick references while in play will keep the player on the straight and narrow.

Card Sharks is an interactive game played against and with animated characters. An interesting and useful feature is the ability to choose lower skilled oponents in earlier games so that the player can understand the particular game he is playing before going to more serious play.

There are sets of characters from which to choose, all with their individual personality and skill level. The idea of beating Margaret Thatcher at Five-card draw has a certain appeal and other possible opponents include President Reagan and Lady Vanderbilt. Card Sharks will allow the user to play fast, exciting card games against class opposition in his living room. It may not be Las Vegas but at least no money will be lost.

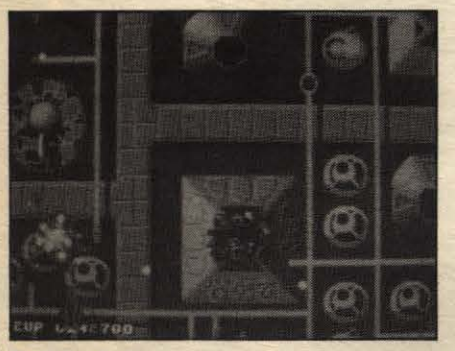
● Card Sharks.

# Sidewinder

**Machine: Amiga**
**Price: £9.95**
**Supplier: Mastertronic**

The Mastertronic concept of producing its own arcade machines, based on an Amiga board, and thus having access to instant coin-up licences may sound a good idea in theory but the reality has been different. Will the public really believe that programs which scarcely stand up as arcade titles are in fact honest-to-goodness coin-up conversions?

*Roadwars, Ballblazer, Rockford,* have



● Sidewinder.

all been disappointing. *Xenon* was good but not first division material but now there is something which looks as if it has just stepped out of an arcade.

The name of the game is *Sidewinder* and for some unfathomable reason – complete lack of originality is the best guess – it costs over £10 as opposed to £19.95 for Xenon. It is unbelievable value.

The plot will not be in the running for a Hugo and Nebula award this year, relating as it does a tale of giant space fleets, deadlocked galactic warfare, a ship the size of a planet, and one idiots' lone attempt to fly through its various sectors in a valiant bid to destroy the control level and eliminate the menace.

The point to note is that each of the levels is fairly distinctive, with differing and intelligently-designed scenery. When you are in the hydroponics level there are plant beds and water-pumping stations, all there to be blown away, of course. There is tons of stuff on the fully-scrolling screen which can be shot at and made to explode. The explosions are wonderful and when there are plenty of them at the same time the effect is exciting.

The scrolling is good considering that the whole screen is operating and it even moves sideways to a limited degree, in the manner of *Flying Shark*.

As is to be expected in a good shoot-'em-up there are extra weapons and facilities on offer at various times throughout the carnage. Add rapid fire for maximum destruction, gobsmacker missiles which will take out a target with a single shot – some targets require up to 15 hits to be destroyed so it is useful to have – limited invulnerability and, strangely, a hover function. Hit the last item and the scrolling stops, enabling you to get at those difficult to reach places.

As the object is to obliterate the command centre it is useful; otherwise it is a pain, as everything still firing on the ground locks on to you and blasts away.

As well as ground targets to womp, there are moving vehicles and airborne defences as well. How difficult it all becomes depends on you, because there are five skill levels so that you can set it up at your own level.

Graphically, Sidewinder is good but not megabrill, though the explosions and sonics are. It may not win prizes for originality but Sidewinder certainly has my vote for being a superb blast and being almost as exciting as a night out with Maria Whittaker.

*Mark Ulyatt.*

# Rolling Thunder

**Price: £9.95**
**Machine: Spectrum 48K/128K/+2**
**Publisher: U.S. Gold**

It is New York City circa 1960 and the world is under threat from the sinister secret organisation Geldra, headed by the villanous Maboo. All that stands in the way of Maboo's treacherous plot being successful is the World Crime Police Organisation.

The undercover arm of the WCPO, Rolling Thunder, sends a secret agent, Leila, to infiltrate the underground headquarters but Leila is captured before she can expose the conspiracy to the world.

The only man capable of rescuing Leila and defeating Maboo is the ace secret agent, code-named Albatross. *Rolling Thunder* begins as Albatross enters Geldra's secret headquarters. The player's job is to guide Albatross through 10 levels, capture the Command Centre and confront Maboo. Armed with a machine gun and a pistol, Albatross first will have either to kill or escape from Maboo's murderous army of guards.

Armed to the teeth with guns and bombs and deadly in hand-to-hand combat, the guards will try anything to drain the scret agent's energy. Hiding in strategically-placed doorways or leaping on to balconies will only delay the next flight. Extra ammunition to top up depleted supplies is available behind certain clearly-marked

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CONTINUED FROM PAGE 72

doors and Albatross is sure to need it as he fights, among other hazards, the Fire men from the lava pool as he battles his way onwards.

Although it may take a time to understand Rolling Thunder, due mainly to an over-abundance of Geldra guards and only one Albatross, it is well worth the effort. The visual aspect is certainly entertaining,

● Rolling Thunder.

with smooth, clear graphics but the sound leaves much to be desired, failing totally to reach the standard of the rest of the game. Turning down the sound will improve the game immensely as Albatross struggles valiantly onwards or upwards. Problems with jumping on to things may occur at first but practice will make perfect and secret agent Albatross will be on his way to victory in no time.

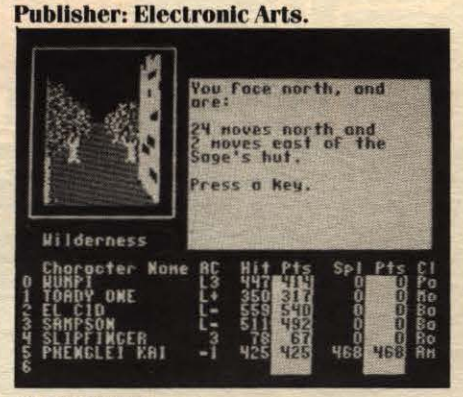
# The Bard's Tale II: The Destiny Knight.

**Price: £14.95**
**Machine: C64/128**
**Publisher: Electronic Arts.**

Knowledge of *The Bard's Tale* is not essential to play the animated adventure *The Destiny Knight*. The user, as the Destiny Knight, must assemble a band of adventurers to find all the lost pieces of the Destiny Wand and reforge the sceptre to re-unify the realm. Unfortunately, there are many hazards between the adventurers and their goal, not least of the evil Archmage Lagoth Zanta.

There are 25 levels of dungeon, miles and miles of wilderness, six cities to explore and plenty of places to visit in the search for pieces of the Destiny Want. The game starts in the Adventurer's Guild of one of the six cities, Tangramayne. There is a group of adventurers already waiting to go but more experienced players may find the facility to load groups from The Bard's Tale or Ultima III useful. The team waiting in the Guild will get through the first problem satisfactorily but after that the user will have to start developing a good team and perhaps create new characters when inside the various Guilds.

There are various character types and




● Bard's Tale

classes, each with their own particular attributes useful in differing situations. The user will find it useful to keep open a character slot in case of special need but beware of the Doppelganger monsters who may enter your party unawares – they will make life even more difficult.

The manual for The Destiny Knight is extremely good. There is a wealth of information on all the varying aspects of the game and there are plenty of hints and tips in case an emergency should occur.

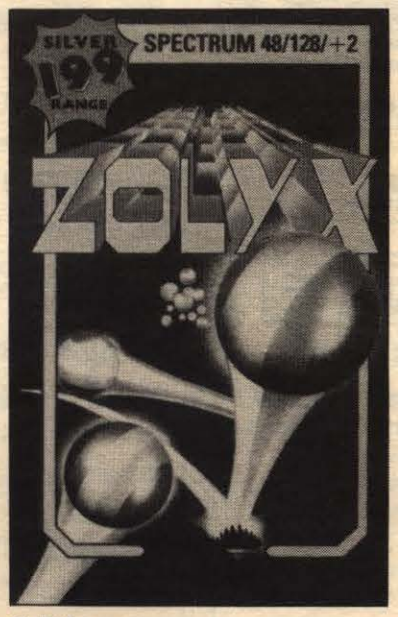
# Zolyx

**Price: £1.99**
**Machine: Spectrum 48K/128K/+2**
**Publisher: Firebird**

A kind of *Breakout* in reverse, *Zolyx* is one of those games where play can start immediately. With re-definable keys or joystick, it is simplicity itself to learn how to play. There is no tiresome manual to read and scarcely any rules to follow, a definite bonus for users who need a break from the more complex types of game.

The aim is clear and simple; an empty screen has to be filled in with blocks. Steer the cursor round the screen while pressing the fire button. That will create lines and any blocks made are filled in automatically by the program. The idea is to fill in 75 percent of the screen with blocks and every one percent above that is awarded with a bonus, with a maximum of 99 percent filled being possible.

Standing, or rather bouncing, in the way of success on the first screen is a ball




● Zolyx.

which flings itself around energetically. If the ball hits the cursor there will be loss of a life. There is another ball which zooms its way round the screen via the lines created by the player. Time spent creating big blocks will result in the ball catching up and further loss of life will occur. After the first screen there are successive levels with an extra ball added each time to make life more difficult.

Zolyx, although not so stylish and rewarding as many other games of its type, is a simple idea and works well for what it is. The graphics are smooth and effective and the game could hold the attention for hours.

As an added attraction, Zolyx comes complete with a free program, *Cellular 2D Automation*, which is based on the *Game of Life*. The aim is to set up a stable colony of cells within a given set of mathematical rules. It is worth a look for interest value but it is nothing more than a diversion from the main program.

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